THE

FARMER'S MAGAZINE:

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(No. XVII.)

BRANCH I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

A short statement of various measures, calculated for the improvement of the County of Caithness, carried on in the course of the year 1803.

Introduction.

THE measures which were in contemplation, for promoting the prosperity of this remote district, have been considerably checked by the renewal of hostilities with France, which so unexpectedly took place at the commencement of this year. A state of war must, in general, be unfavourable to all sorts of improvement. The difficulty in obtaining capital to carry them on with spirit; the scarcity of hands, owing to the demands of the army and navy; and, in remote situations, the trouble attending the procuring seeds and other articles by sea, from distant parts of the country, and skilful labourers, where they are necessary for the introduction of any new system, are all hostile to active and great exertions. But if that was the case on former occasions, it is still more so at present, when we are threatened with all the horrors of conquest, by the most powerful state that has arisen in modern times; and when people in general, seem more inclined to consider what are the best means of preserving what they have got, than of acquiring more. It were much to be regretted, however, if such a spirit were to become general. If that should be the case, this country would soon become unable to persevere in so arduous a contest. The best foundation of its strength, is the cultivation and produce of its own soil, and if, in addition to the other calamities of war, we were to be under the necessity

of depending on foreign nations for any large proportion of our subsistence, at a time when our commerce must necessarily be considerably diminished, our wealth would quickly disappear, and our distresses would accumulate to a height which might produce the most disastrous consequences. This is a subject which, it is to be hoped, will soon attract the attention of parliament; and that some system will be adopted for the purpose of furnishing the landed and the farming interests, with the means of carrying on the cultivation and improvement of the country, if possible with greater energy than ever, as the best mode of enabling us to prosecute the present war, with additional spirit and success.

In addition to the calamities of war, the last season also, was, on the whole, highly unfavourable to agricultural improvements. The spring and the beginning of summer were cold and ungenial; and though the months of July and August were dry, and consequently well calculated for the operation of burning, yet from the want of rain at that critical period of the season, the crop of this year has but little straw, and though the quality of the grain is wholesome, yet it is hardly equal in quantity to the average produce of Caithness. This is the more to be lamented, as the preceding crop turned out a worse one than any remembered in that county for some years.

1. *Improvements of Wastes.*

This most important object was carried on to a considerable extent, during the year 1803; preparations having been made for that purpose, previous to the war breaking out. The dryness of the summer was favourable to burning, a species of improvement of important consideration. On the whole, in the course of the last season, probably *above a thousand acres* might be put in a progressive state of cultivation, of which about 430 were in the hands of one proprietor.

The best system of improving commons, that have a good depth of soil, with a rough surface, and that is capable of being burnt, is now pretty well ascertained, in so far as regards this northern district. The land should be ploughed in the winter months, cross ploughed in spring (that the clods may not be crumbled to pieces by the winter frosts), and burnt in summer; the ashes then spread, and ploughed in; and early next year, after being well harrowed, should be sown with oats and grass-seeds. In a better climate, the burning may take place earlier, and oats or bear may be sown the first year; and where sheep are abundant, a crop of turnips may be taken, but, on the whole, the plan above mentioned, is the best that has hitherto been attempted in this district, and though

though slow, yet, being done gradually, requires few cattle and servants, and is sure of success. There is no other mode by which many thousand acres of waste land in this county could possibly be brought in, with nearly the same advantage. To give such a land a sufficient doze of lime, would require from 5 l. to 10 l. per acre, according to the distance of conveyance; whereas, by this system, the expence does not exceed from 2 l. to 3 l. per acre; and the first crop of oats alone will pay the whole expence of the improvement, including the inclosure.

2. *Paring and Burning.*

Several skilful hands were brought from Westmoreland this year, in order to carry on the system of paring with the breast-plough, and then burning the turf thus obtained. In all, about 100 acres were treated according to this plan. From the thinness of the turfs, several acres of land thus prepared, might have been burnt, and laid down with oats in the course even of this year; but unfortunately the men were detained at Leith for about three weeks, waiting for a conveyance by sea to Caithness, and consequently were too late in coming. Little do those who live in the southern part of the kingdom know the disadvantages under which their northern brethren endeavour to rival them in improvement. About 50 of these acres were pared and burnt, with a view of providing for some small farmers, whom it was necessary to remove, in order to complete the cultivation and inclosure of an extensive tract of country in the neighbourhood. These farmers are continued in their old possessions till Whitsunday next, when they remove to their new farms. The 50 acres is to be cropped by the proprietor, which will entitle them to the benefit of the straw; and some acres are also to be laid down with grass-seeds for them. They are also to have about 50 acres of valuable pasture, adjoining to their arable land. Their lease is for 15 years. The rent is sufficiently moderate, namely, 3s. per acre for the first five years, 6s. for the second five, and 9s. for the third five, and half as much for the pasture land. But though the rent is low, yet that is compensated by the satisfaction of establishing a new colony of farmers, on a barren waste, on a system that is likely to encourage their exertions, and which, at any rate, will necessarily promote the improvement of that part of the country.

3. *Fen Husbandry.*

It was of the greatest importance to try the fen system of husbandry, near the sheep farms established in this county,

with a view of raising winter provision for that valuable stock. Unfortunately, however, there was no flat or low-lying mossy ground in that neighbourhood. It was necessary, therefore, to plough the sides of hills, considerably elevated above the level of the sea. The seasons of late having been peculiarly unfavourable for this important species of improvement, its progress has been greatly retarded; but, on the whole, the prospect of success is at present flattering. About 60 acres have been laid down with rape, turnip, and grass-seeds, and the appearances of these crops are promising. A hardy species of grass, peculiarly adapted for mossy land, has been brought from the fens of Cambridgeshire, and it is proposed to try a long small white oat, from the neighbourhood of Whittlesea-Mere, in Huntingdonshire: which, from its hardiness and earliness, will, it is believed, succeed. Next season will certainly decide to what extent this system ought to be prosecuted in a hilly district. In a flat country, abounding with deep bogs, or mosses, there can be no doubt of its being infinitely preferable to every other.

4. *Commons.*

An extensive common having been divided not far from the town of Thurso, a considerable part of which, though rather elevated in point of situation, yet was capable of cultivation; one of the proprietors, whose share amounted to above 2000 English acres, was anxious to try what could be effected for the improvement of so valuable a tract. The whole was, in the first place, divided into 50 lots, varying, in extent, from 12 to 20 acres, and upwards, according to circumstances, and the divisions marked by the plough, which was itself a troublesome business. Three modes of improvement were then adopted. 1. Some lots the proprietor himself undertook to improve, by paring and burning, in the manner already described, in order to provide settlements for some small tenants, to be removed in the neighbourhood. 2. Some lots were let to new improvers, who became bound to cultivate them at their own risk and expence; and, 3. A number of other lots were annexed to the neighbouring farms, under the obligation of improvement. Where this plan is practicable, it is certainly an excellent mode of improving commons, as a farmer has many advantages, which it is unnecessary here to point out, for bringing in, at a cheap rate, the waste lands in his vicinity. One spirited improver (Mr George Miller of Whitefield, near Thurso) deserves to be particularly commemorated upon this occasion. Observing the success of the new modes of improving waste lands, which had been introduced into the county,

ty, he offered a rent of L. 40 per annum, for 190 acres, in that part of the common which happened to be in his neighbourhood. The lease is rather long, namely, for 31 years; but it was desirable to encourage an active and judicious improver, who began ploughing his new farm almost before the ink was dry upon his lease; and though the land was intrinsically valuable, yet this was the first instance, in that part of the kingdom, of drawing such a rent from a tract of land that formerly had yielded nothing.

5. *Sheep Farming.*

It was generally believed that Caithness was but ill adapted for a sheep stock; and when not only sheep were introduced into the Highland parts of the county, but also so superior a breed as the Cheviot, it was foretold, both in the southern, and in the northern parts of Scotland, that the plan could never answer, and that it would necessarily be attended with considerable loss. The attempt, however, has been most successfully carried on for several years; and, with a view of ascertaining the practical effects of the experiment, the grazings that were put under sheep, were advertised to be let. The commencement of a war is certainly an unfavourable time for letting land, more especially at such a distance from the metropolis; but the success of the sheep system, in those parts, was so uncontrovertibly established, that some of these grazings, which ten years ago had only paid L. 87, 16 s. a year, were let at L. 600 per annum; and, in the opinion of intelligent men, were worth L. 100 more. It was thought adviseable, however, to give peculiar encouragement to the first farmer (Mr James Anderson), who resolved to carry on a new system, on so extensive a scale, in so remote a district; more especially, as he was likely to do ample justice to the plan. A higher rent will be obtained for the other grazings still to let in the same neighbourhood; and, on the whole, there is reason to believe that no agricultural improvement has hitherto been made, with more profitable results; a tract of country having been thus raised from a rent under L. 200, to above L. 1200 per annum.

It is earnestly requested, that Highland proprietors, more especially those with moderate incomes, will make themselves masters of a plan, which experience has thus sanctioned; and by which, at a moderate expence, they will not only render themselves and their families opulent, but will likewise greatly promote the industry, and increase the wealth of their country.

Cattle.

6. The introduction of the best breeds of cattle into a district, according to the various purposes for which they are destined, is a most important mean of improvement, which cannot be too anxiously attended to. Several experiments, with that view, have been tried in Caithness, in the course of this season: among the rest, Col. Williamson has introduced the Argyll breed, which there is every reason to hope will answer. Mr Paterson has brought some oxen from Aberdeenshire for ploughing, and some cows from Buchan have been sent north, of a sort, considering their size, famous for the quantity of milk they produce*. It is proposed to compare this breed, with the Ayrshire Cows, so celebrated for the Dairy, some of which have been brought by Mr Dunlop to the neighbouring district of Strathnaver.

7. *Improvements by small Tenants.*

It is certainly desirable, to preserve as much as is consistent with the improvement of a district, its old inhabitants, who are attached to it by many ties, and who might not for some time feel themselves equally comfortable in other situations. It is difficult however to adhere to this principle, where

* The Buchan Cows are not so well known as they deserve to be. The best sort are polled, generally of a dark or brown colour. They commonly weigh, when fattened, from 17 to 18 stone, (16 pound Dutch weight to the stone). They are of so thriving a quality, that they are generally fat at the end of the Autumn, without much attention having been paid to their food, and tho' fleshy, they continue to milk well. Tho' their size is small, they will give from 6 to 8, and even as high as 14 Scotch pints of milk per day, (equal to as many English quarts.) They are fed principally with Oat Straw in winter, which is found greatly preferable to bear or barley straw. Sometimes they also get what they call *plotted hay*, or hay with boiling water thrown on it. Some sea ware is also given them, which is very conducive to milking well; but above all they have a practice in the neighbourhood of Peterhead, of giving them green kail in April, which is sown in the spring preceding, transplanted in June or July, stands the winter season better than turnip, and vegetates very strong in April. By adopting this plan, the dreadful interval for the farmer, between the winter and summer feed, might in a great measure be filled up. In general from 10 to 12 Scotch pints or English quarts of their milk, give a pound of butter. They have made, near Peterhead, buttermilk cheese, but it answers better when the buttermilk is mixed with other milk.

where the tenants are poor in circumstances, have little skill in Agriculture, and have not even cattle or instruments of husbandry calculated for carrying on any proper system of cultivation. A plan however has been fallen upon, which tends in some measure to obviate these objections. Some small tenants have been prevailed upon to enter into an agreement with a considerable farmer in their neighbourhood, by which he engages to plough for them, the waste land attached to their farms, at the rate of fifteen shillings per Scotch acre, the price not to be exacted, until a twelve month after the work is executed, when they will be enabled to pay the expence from the crops they raise. The plan has been so much approved of, that the small tenants in one district, have had about 50 acres of waste land ploughed for them on this system, in the course of this season. Their own miserable cattle and instruments of husbandry, could never have broken up such a soil, but when once it is properly ploughed, they are able to manage it tolerably well by their own exertions; and in process of time, they will probably become more opulent, and abler to do justice to their farms.

8. *Towns and Villages.*

The increase of towns and villages, is one of the surest signs of the prosperity of a country; and in this important particular, the county of Caithness is not deficient. Several houses have been built this season in the new town of Thurso. The village of Castleton, erected by Mr Trail, goes on prosperously; and it is impossible to pass through that thriving place, without feeling much satisfaction, at the industry that seems to prevail there, and the contented looks, and comfortable circumstances of the inhabitants. A new village called Brodies-Town, from the name of its spirited founder, is rising on the eastern coast of the county, in a situation admirably calculated for the herring fishing. Some progress is making in the erection of a village at Halkirk, and it is expected, next year, that the British Fishing Society, will make some exertions, towards establishing a fishing settlement on the feu it has obtained from Sir Benjamin Dunbar in the neighbourhood of Wick.

9. *Roads and Harbours.*

The attention that has lately been paid to the improvement of the northern parts of Scotland, must do infinite credit to the legislature of this country, if the measures they have chalked out are prosecuted with proper zeal and energy. A foundation has thus been laid, for a new system, not of foreign,

but of domestic colonization, which will be found infinitely preferable to the cultivation of distant settlements. But the acts which were passed, granting certain sums for carrying on the Caledonian Canal, and for making roads and building bridges in the northern counties, under the direction of Commissioners appointed to oversee the expenditure of the money, were enacted too late in the season, to expect that much could be done in carrying on such great undertakings, in the course of the present year. In consequence, however, of the correspondence that has been established between the Commissioners, and the gentlemen of Caithness, there is reason to hope that considerable progress will be made in the course of the ensuing season. It cannot be doubted, if this district were made accessible, and proper communications carried through it, that it would soon rival more southern districts in every species of improvement.

It is proper here to add, that a thousand pounds have been granted, from the public funds of Scotland, for erecting a harbour at Wick; and there is every reason to hope, that that important undertaking will be carried on with proper spirit in the course of next year. As Wick is the true centre of the deep sea herring fishery, the erection of a harbour there, is perhaps one of the most important objects to which the public attention could be directed, or in which the public money could be employed.

10. *Miscellaneous Articles.*

1. The establishment of an Woollen Manufacture, at the new village of Halkirk, has taken place this year. The machinery has been already erected, and from the prices which Mr Walker the manufacturer has demanded, the farmers in the neighbourhood are satisfied, that they cannot manufacture their wool so cheap, by their own servants, as by him; whilst, at the same time, it is done by his machinery, in a manner greatly superior.

2. This year also a post chaise and a pair of horses have been set up by Mr Ryrie, innkeeper at Thurso, which is likely to answer. It is singular, though there had been some attempts to keep post chaises at Inverness, yet that they were all given up in the year 1773. Mr Ettles set one up in 1775; which was then the only one so far north. There are now seven kept in Inverness alone, one or two at Tain, and one at Kessock. It is proposed to have, next year, a diligence on the Highland road from Perth to Inverness, and it is to be hoped that, in due time, the plan will be extended to Caithness. The advantages of having such modes of conveyance from one end of the kingdom to the other are inestimable.

3. Mr

3. Mr John Reid of Heathfield near Thurso, laid down a small field of bear which he could not get sown till the 24th of June last: It was cut down on the 24th October, and produced upwards of ten returns of good merchantable grain. It would probably have produced two or three seeds more, had it been sown earlier; but this experiment tends to prove, that in very unfavourable seasons, a crop of bear may be laid down much later than is commonly imagined, and with the prospect of a handsome return.

4. A Limework is intended to be carried on on the estate of Major Innes of Sandside, which it is hoped will be a source of great improvement to all that neighbourhood.

Conclusion.

Some prejudices, it is said, are entertained against the publication of such accounts of local improvements, as if they originated from other motives, than a sincere and ardent wish to promote the prosperity and interests of the country. But how could it otherwise be known by the public, what is doing in so remote a district as Caithness, which is so seldom visited by strangers? and can it be questioned, whether these hints may not in various respects contribute to the benefit of other counties? Is it of no consequence that the success of the Cheviot breed of sheep, beyond the possibility of doubt, should be spread over all the Highland districts, and the way pointed out, by which the rent and value of that extensive tract of country, may in many cases be increased six-fold? Is it nothing to have facts authentically published, regarding the various modes of improving waste lands, by some of which, the expence of the improvement is repaid by the first crop that the ground produces? And is no benefit to be derived, from a knowledge of the success attending the introduction of new breeds of cattle, new sorts of grain, new kinds of grass, &c.? Above all, can it be doubted, that the country at large is interested, when new towns and villages are erected, and new manufactures and other improvements successfully carried on? Instead therefore of objecting to the publication of such accounts as unnecessary, which is all that can be urged, for it is impossible that any detriment can arise from them, it would be much better for public spirited individuals, to promote, as much as possible, the adoption of such a plan, in all the various districts in the kingdom; in order that experiments happily adopted in one county, may prove the source of similar improvements in other places.

Edinburgh, 25th Nov. 1803.

Appendix to the above Statement.

AMONG the numerous commons in the county of Caithness, the most extensive and valuable is known under various names, as the Hill of Forse, of Scrabster, &c. and in all it is supposed that this tract contains about 8000 acres, mostly green ground, and capable of cultivation. The necessary steps have been taken, for having this common divided by act of parliament; and a plan has been formed, connected therewith, which cannot fail to give satisfaction to every friend to the improvement. It is founded on certain resolutions adopted by the magistrates, and other inhabitants of the town of Thurso, of which the following is a copy:

AT a meeting of the Magistrates and Feuers of the town of Thurso, assembled to take into consideration the propriety of applying to parliament for a division of those commons called the Hills of Forse, Scrabster, Aust, Giese, Ormly, Thurso, Pennyland, Holburnhead, and Brims, and all the mosses, muirs, and other waste lands connected therewith,

The following Resolutions were adopted.

I. That it appears to this meeting, in many respects, extremely material, that such extensive commons, containing, it is supposed, about 8000 acres of land, by far the greater part of which is capable of improvement, should be brought into cultivation as speedily as possible.

II. That it is peculiarly desirable to bring forward such a plan at the present time, as the division of so extensive a tract may furnish the means of occupation and subsistence to numbers of persons in the Northern districts of the Highlands, who may otherwise be reduced to the most poignant distress, in consequence of their plans of emigration having been checked by legislative provisions, and no means of subsistence having been pointed out to them.

III. That in the course of the division, a portion of these commons will belong to the crown, as proprietor of the lands of Scrabster, there is reason to hope, from the great attention paid by his majesty's government to the situation of the Highlanders, that these allotments of waste lands, may be appropriated by the crown for so beneficial a purpose as that of forming new settlements for natives of the Highlands; and it being also probable, that government

may

may be desirous of making such settlements on a large and liberal scale, that it would be advisable to dispose the allotment of the waste lands that may belong to the town of Thurso (exclusive of the mosses) to the crown, at any fair price that may be fixed upon by the commissioners appointed by the act; and that the price received for the same, shall be employed in paving the streets, improving the harbour, and carrying on other public works, the most likely to be advantageous both to the town and neighbourhood.

IV. That were this plan carried into execution, three objects of great public importance would at once be accomplished; for it would have a tendency to promote the improvement of a town, situated in the remotest part of the kingdom; it would be the means of speedily bringing into cultivation an extensive tract of valuable land, now lying totally useless; and the hope of such a settlement would cheer the heart of many as brave and worthy subjects as any in his Majesty's dominions, whose prospects at this time are truly deplorable.

V. That a copy of these Resolutions, together with the sketch of a plan for making a royal colony at Scrabster, be transmitted to his Majesty's ministers, to the commissioners appointed by act of parliament for carrying on the roads and bridges throughout the Highlands, to the barons of his Majesty's exchequer, and to the officers of the crown in Scotland.

Sketch of a plan for establishing a *Royal Colony* at Scrabster, in the county of Caithness, on a tract of Common, which will be allotted to the Crown, together with some waste lands to be purchased in its neighbourhood.

Let us suppose that 3000 acres in all are employed in making the intended settlement, of which one half belongs to the crown, and the other half must be purchased.

It is proposed, on part of the land, near the burn, or water of Scrabster, to erect a village for labouring people, and to divide the remainder into small farms.

The village to consist of a hundred houses, each house to have, at an average, 3 acres of land attached to it, which would enable each settler to keep a cow, (of the breed of that country), summer and winter. It is supposed that this quantity of land, namely 3 acres, might be cultivated by means of that excellent instrument the *Cascroum*, (a kind of foot plough) which the Highlanders can manage with great dexterity, and which is too little known.

As

As the place is entirely a new settlement, and the settlers, with their families, must in general come from a considerable distance, they will require at least 10l. for each family, to assist them in building a house, inclosing their land, &c. but they would be able to pay at the rate of 10s. per annum, after the first seven years, by which the public would be amply indemnified for all the expence which they occasioned; and, in process of time, that rent might be increased.

As to the small farms, it is proposed, that they should consist of 10 acres each, one acre for the house and garden, and the other nine to be divided into three portions for a rotation of grain, grass, and green crops. These small farmers would be possessed of some property of their own, tho' at the same time, might require, perhaps, 20l. each, to assist them in buying seed, working cattle, &c. but they would also be able to pay at the rate of 10s. per acre after the first seven years, and their rent might afterwards be increased.

It is supposed, that to the amount of 2,500 acres might be divided in this way into 250 farms, this, with 100 settlers in the village, would make 350 families; which, at six to a family, for their children are very numerous, (more especially since inoculation has been introduced) would make in all 2100 souls.

The expence attending the proposed colony, would be as follows:

1. Value of 1500 acres, to be purchased at 4l. per acre, (the remaining 1500 being the property of the crown)	£.6000
2. Expence of surveying, allotting and dividing the same	500
3. Allowance to 100 village settlers, 10l. each	1000
4. Allowance to 250 small famers, 20l. each	5000
	£. 12,500

At the end of 7 years, the settlement would produce, at the rate of 10s. per acre, 1500 l. per annum, with the prospect of a considerable increase.

It is proper to add, that the settlement is situated not far from the sea, in a bay, well calculated for carrying on the cod, and other fisheries, in which the people would partly employ themselves; so that this colony would prove a valuable nursery for seamen, besides being in other respects so useful.

Let this plan be compared with any scheme of foreign colonization.

nization, and it will not be difficult to decide which is entitled to a preferment *.

FOR THE FARMER'S MAGAZINE.

Short Retrospective Notices of Agriculture in Tweedale.

Besides those permanent improvements of extensive outlay, and of distant return, (generally considered as exclusively belonging to the department of perpetual landed proprietors) which Mr Findlater has specified in his survey of our country, as performed at their own expence, by tenants upon the estate of Neidpath, upon the security of leases of 57 years; whose length of endurance secures to their possessor an absolute right of free transmission, and alienation, so encouraging to the fixing of his own capital in the soil, and so favourable to the proving of credit for other capitals to be launched out in the same enterprize. Besides the improvements of this description, so executed, in building, planting, and stone dyke enclosure, improvements, of mere surface culture, have been going on in pretty rapid progression, upon the security of leases of the ordinary endurance of 19, 20, and 25 years.

In the latter description of improvements, probably the parish of Eddlestone, of whose Farmers Club you have made honourable mention in your last, may be considered as being among the foremost; and that, in consideration, not only of the *universality* (with trifling exceptions) of the adoption of the improved husbandry in every farm, but also, as to the *extension* given to it, in several particular forms. Not only are the croft lands (or those destined for continued tillage) reduced to such regular rotation, that, at a glance over the fields, you can pronounce what had been the former crop upon each, and what will be the next succeeding one: but, in various instances, the hand of culture has been extended to the hills of lower elevation; destined for perpetual pasture, as unfit, from poverty of soil, to make any adequate return for the expence of continued tillage. These (in their natural state, covered with a coat of short stubby heath, and almost of no value whatsoever) have been fallowed, limed, and (where compost and dung was attainable) sown in turnips, which were eaten upon the ground,

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* If the Crown would give up its share of the common, (from which at present it derives no benefit) a company might probably be erected to carry so useful a plan into execution, at its own risk and expence.

ground, and afterwards sown with suitable grasses, to remain in permanent pasture. It is to be hoped, that these spirited undertakings, set on foot within these half dozen of years, shall properly reward their authors.

The turnip and sown grass husbandry, might have begun to rear its head among some of the tenantry in this parish, probably twenty years ago; its so universal prevalence cannot be dated back for more than ten or a dozen years, the enterprises upon the hills being of still later date. When turnips first began to prevail, they were singled in the drill by the slow and expensive operation of cautious hand weeding; now, all the young people of the parish are accustomed to *single* (in English, *set out*) with speed and dexterity, from the time their arms are sufficiently strong to manage the hand hoe. In the similar former slow operation of hand weeding, the weeds, in the intervals, often got a head before the singling was completed; and the only instrument and operation used to humble them, was the paring of the ridges by the plough, which exposed the narrowed drill to drought; and if you went near enough to cut the weeds closs from the plants, endangered the oversetting them, together with the earth they stood upon, or the overwhelming of them by the mouldering earth spewing out to the left hand of the plough; now, the intervals are neatly cleaned of weeds by a horse hoe, with a thin triangular sock, to cut the weeds at the bottom of the furrow, and with two coulters, or shaving irons, converging below, and diverging above, with a regulator to straiten or widen them to any dimension of interval, which shaves off the weeds, without taking off almost any earth from the sides of the two drills, betwixt which it is drawn along.

Having taken this special notice of Eddlestone, to which you have already attracted public attention in your last, I have to observe a few things in regard to Tweedale husbandry in general.---Be it known, then, to you and your readers, that the progression of the improved husbandry, must soon lead to a great change in the arrangement of Tweedale farming economy: While less prevalent, the hay crop was ever considered as a marketable part of the farmer's produce, and there was sufficient demand for the whole: the market, however, seems now overstocked; the annual produce exceeds the annual demand; and probably the farmer must betake himself to the consuming of this article in the house by bullocks; or, to depasturing it by sheep, from the starting, without cutting it at all, after the manner of East Lothian. A considerable part of this year's crop is winter stacked for want of demand; several farmers have upon hand the crops of both this and last year, having

having little prospect of getting clean handed by sale, unless by demand for the store sheep, if the winter proves severe, or by the emigration of your Lothian cattle as boarders, when an enemy shall appear upon your coasts.

Mr Findlater, our county reporter, has observed, in his survey, 'That improved husbandry, from its superior produce, 'enables higher rents to be offered; and that higher rents thus 'necessarily given, enforce the adoption of improved husband-'ry, without whose superior produce they could not be paid.' We have, of late, experienced a little of the truth of this maxim; very high rents, indeed, (to very near the tripling of the former) have lately been given for Tweedale sheep farms, upon the *speculation* of the superior product to be raised from the fine wooled cheviot, compared with the accustomed coarse wooled, black faced, horned breed of sheep; this will certainly enforce the adoption of the same *speculation*, as the former mode of practice will not yield produce to answer the rent: I say, *speculation*, as the price of the fine wooled has not yet come to its level; nor will it, till the rage of speculation for this mode of stocking shall have been satisfied, by full plenishing among such as are now in quest of them, and are willing to give for them, a *pretium affectionis*.

The Swedish turnip is more and more in request among farmers, particularly in Newlands parish, where they have been pretty much extended within three or four years; in some parishes they are not yet known: They will never be depended upon for the chief part of the crop, and will only be sown in general practice, to the extent of *corps de reserve* for spring; for they grow not seemingly to the same weight of crop; they require also earlier sowing; consequently, like potatoes, constitute a crop less favourable to thorough cleaning of the land; they require, besides, land more rich by nature and by art.

The winter storing of turnips of the common kind, is becoming yearly more prevalent; piled up in long narrow ridges, on the surface, perhaps 8 feet wide at base, and contracted like a wedge, and thatched to the ground with divot, straw, or rashes. This mode of improvement came to us from the west, a few years ago: even if the bulbs only are preserved, and the shaws lost, it is a great saving, as in two years out of three, all our turnips upon the ground at Christmas, are entirely lost by the frost. Turnips stored as above by Hallow-day, are perfectly good at April. The shaws immediately ploughed in, are found considerably nourishing.

A gentleman farmer in Tweedale (who unites the assiduity of the Practical Farmer, to the superior information of the man of letters, to the discharge of the public duty of a resi-

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dent landed proprietor, and to the gratuitous practice of his original medical profession among his friends, and the poor in his neighbourhood) has, of late, constructed covered sewers, inside the wall (to prevent admixture of rain) of all his cattle farm offices, with iron borders, to admit only the urine; these all terminate in one common reservoir, also under cover, in one of the feeding byres, constructed of free stone, and covered by a Hailes flag, which can be raised by a ring, when necessary, to clean the reservoir; in the reservoir is a pump. Perfect command being thus obtained of the urine in a pure, unmixed state, I hope the public shall in due time be favoured by him, through means of your publication, with his agricultural results from the various applications of that hitherto too much neglected mean of improvement. He knows well how to conduct an agricultural experiment with accuracy; and to draw from his inferences, with equal sagacity. I am yours, &c.

Nov. 18. 1803.

A Member of Eddlestone Farmer's Club.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Drilling of Corn, &c.

SIR,

THE drilling of corn is making rapid progress in Berwickshire, and on the other side of Tweed, and I hear no complaints of want of success. I do hear many complaints against drilling machines, from the difficulty of keeping them in a streight direction, running the drills into each other in some places, and leaving corresponding wide gaps in others; and from the difficulty of keeping all the hoppers equally right, one or more often choaking, and consequently bilking so much land of its seed. My drilling is performed with perfect regularity and precision, by a small double-mould board plough, going backwards and forwards, exactly as if drilling up the land for turnips, only narrower, about 12 inches, and followed, or rather preceded by a drill barrow, for which I have groved nuts of different powers of delivery, for different grains.

I say the barrow precedes the plough; having drawn one hollow drill with the plough, the barrow enters where the plough comes out, and goes on to the end of that drill, being lifted out till the plough comes again to turn. The plough follows to make the second hollow drill, in doing which, the seed in the first is lightly, but completely covered. When the field is drill-

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led out, the harrow, followed by a heavy roller, makes all smooth. In my dry land, I generally sow all level, without water-furrows; and with my plough and harrow, am rather at a loss for water-furrowing, which some of my land certainly requires.

I have seen, however, what appears to me a better plan, and completely calculated to obviate that difficulty; and I think the implement is mentioned in the Survey of Mid Lothian. A common plough has a drill-barrow attached to it, susceptible of being easily made to deliver its seed, or withhold it, at pleasure. In this way the land may be gathered, and the seed sown under furrow, with the utmost regularity, and the water-furrows formed. After harrowing, these can be opened up in the usual way, and the land finished with the roller, or not, as may be judged best, according to circumstances. On my land, I prefer rolling heavily, as it is very dry. Indeed, but for that, I should have been extremely ill off this season for straw, as it enabled me to mow my whole crop.

The same extensive culture of wheat takes place here, and probably for the same reason, as in other places, the unsaleable nature of barley. I shall not be rash, in blindly imitating the example; for, though I have been very delicate in taking wheat, I cannot much boast of my success in any of my trials. My land seems to want sufficient ſtrength for maturating that grain. I enter into no theoretic reasonings, on the different natures of wheat, barley, and oats; but such seems to me a fair statement of the fact, that wheat requires a certain degree, at least, of clay in the soil, all other circumstances being equal.

Turnips are letting at a high price in this county. Mine, which were but a middling crop, are let at L. 6 the English acre; though, in a good turnip year, they would not have brought L. 2, 10 s. None of them failed; but they gave over growing a great while, during the long drought, and threatened to die altogether, as their leaves were generally withered, all but the crown, and there became discoloured.

I hear universal complaints against ruta-baga, from its uncertainty of growth. I sowed about two acres in the middle of May. They all grew, but the crop is very inferior to a good crop of turnips; I dare say not a quarter of the weight. This having been a very unfavourable year, I shall not yet desist from having two acres or so of my turnip-fallow annually in ruta-baga, till experience determines positively, whether to extend its culture, or to give it up altogether. The culture of ruta-baga would certainly be most convenient, if

a tolerable crop could be depended upon, as beginning earlier the tedious business of turnip-sowing, and lasting longer for spring food, which are important considerations.

In the turnip fields of some of my neighbours, I am told there were a considerable number of small caterpillars this summer; but as they were not extremely numerous, and did not attack till the plants were a good deal advanced, they are said not to have done much damage. On my ruta-baga I observed several plants infested with the large common caterpillar, which we call usually the kail-worm, from which I believe the white butterfly proceeds. They were so few, however, as to do little harm; and I could not discover one of them upon the common turnip. I am no botanist, but I believe the turnip and ruta-baga are decidedly of different genera or families of plants; the ruta-baga being more allied to colewort and rape, and the turnip to mustard. But, on this subject, I must request the information of some of your botannical correspondents.

I tried this year a species of Hasting pea, but for which I have no name. It is of a dun yellow colour, much spotted, and a great deal earlier than the Scotch hot-seed pea. This I can distinctly ascertain, having had both in the same field, and my yellows were ripe above 14 days sooner than the others, sown exactly in succession. The Scotch gave at least double the quantity of straw or palm; but nothing could exceed the apparent productiveness of the yellow spotted pea, in corn.

I am most decidedly convinced of the advantage of drilling peas. The field above mentioned was drilled at twelve inches distance, except the head-lands, and a few irregular short buts, which were broadcast. The drilled part, being hoed, was clean, like a garden, and completely covered with crop; insomuch that, when the plants grew heavy, and fell over, not an inch of land was any where visible. The broadcast head lands and buts showed only a few straggling plants, choaked up in an infinity of weeds, of every kind; and I am sure, if gathered separately, would not nearly have produced the seed given to their part of the land. I am as decidedly confirmed, by experience, in the great superiority of drilled beans over broad-cast; and have not sown any in the latter way for several years. Next year I mean to drill my tares.

Nothing farther relative to husbandry occurs to me at present, except what I think a very great improvement upon the thrashing machine,—working both the rakes by a train of wheels, instead of the old way, by belts. I was so unfortu-

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nate as to get a bad machine, six years ago, which went on progressively, from middling to bad and worse, till at length it failed so much, that I have got a new one entirely. In the old, where the rakes were driven by belts, if the straw happened to be rank, I was obliged to post a person at the rakes continually, to help them forward, when choaked. I need not say that a proper train of wheels obviates this, with absolute certainty. The fanners do not need this precaution, as not liable to the same cause of checking their motion, and being infinitely lighter to drive. Besides, their distance would render a wheel-train cumbersome and inconvenient, as well as a great additional expence.

In horse-wheels there are two modes of draught. By traces, from low starts; and by the shoulders, from starts placed high above the horses. I shall not trouble you with mathematical reasoning on the subject, leaving that to others more competent. But it may be incontestibly demonstrated, that on a start of 13 feet long, the horse which draws by traces, operates with a lever, at least three feet shorter, in effective strength, than when fixed to perpendicular limbers, on each side of his shoulders. Hence, the power of four horses in the one way, barely exceeds the power of three horses in the other, by about a thirteenth part of the power of one horse: Or, in other words, three horses, drawing by the short chains at the high starts, are almost equal, in power, to four horses drawing by long traces, at the low starts; every other circumstance being equal. In my new machine, having that improved method of draught, my four horses work a vast deal easier than in the old one, which was drawn by traces; although the feeding rollers in the new machine are completely a foot longer than those of the old, and it consequently does so much proportionally more work in the same time.

Another very important consequence attending this superior mode of yoking the horses, is, that it admits of breachings, by which the machine is instantly stopped with the utmost readiness, whenever that is required. Whereas, in the old way, by traces, it required a great deal of time and trouble, to get the machine stopped.

There can be no doubt, that wherever water can be had conveniently, and not at too great expence, it is the most economical, and most effectual power for working a thrashing machine. Where that can not be had, a wind-mill is certainly the next best way, especially if the farm be of sufficient extent to warrant its expence. But, even in such cases, it is highly proper, and even necessary, to have a horse-wheel, to supply fodder and litter, in times of long continued calm weather.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

I CONCEIVE it is not inconsistent with the purpose of your useful publication, to enquire into the legal provision made in this country for maintaining the poor; the mode of its management and application; the effect of both upon the national character, and the consequences thereof to proprietors and possessors of land.

That the poor, the aged, the infirm and destitute, ought to be relieved and supported by the community to which they belong, is a principal inculcated by the laws of nature and revelation, and generally enjoined by the statute-law of every well regulated society. The great object to be attended to, in the exercise of this virtuous principle, is, to draw the proper line of distinction betwixt callousness of heart and indifference about the concerns of the poor (on the one hand), and the making such liberal provisions for their support (on the other), as to hold out a temptation to want of frugality and economy, by encouraging sloth and idleness, which seldom fail to produce profligacy of manners; and these in their turn, by creating want, are certain of resolving into abject meanness of spirit, and dependence upon others; which, of all things, tend most to degrade the character, and lead to the very evil which the public provisions for the poor was meant to correct.

These positions cannot be better illustrated, than by the opposite effects produced by the operation of the poor-laws, and their management, in the two divisions of this island.

There is no country where greater liberality is displayed by all ranks of people than in Scotland; where the poor are provided for at less expence; and where greater sobriety and decency prevails among that description of people, and more of that modesty and humility, becoming their situation. Whereas in England, the provision for the poor is most exorbitant. The burden is becoming every day more intolerable, and will undoubtedly, at no distant period, rouze the attention, and call forth the vigorous interference of the legislature, to remedy a growing evil, which threatens to overwhelm the country. Besides the immensity of the sums allotted for the poor, to the amount (it is believed) of several millions a year, it is scarce to be supposed that they will, in every instance, be managed with the most perfect economy. But what, in a national view, is the worst of all; this liberal provision, which

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was meant for good, is productive of the very worst of evils to the poor themselves. Persons of that description, knowing that the laws of the country have made ample provision for them, when reduced by sickness, misfortunes, or arrived at old age, never study to exert themselves to save a small pittance of their earnings, to support them in these times of unavoidable distress, but squander (in riot and drunkenness) every sixpence that is not absolutely requisite for bare necessaries. It is said to be no uncommon thing, in many towns in England, for tradesmen, after they have exceeded their week's earnings in a tavern bill, to leave their best suit of clothes in the hands of the landlord, as a security for their debt, till the next meeting; and which they never study to redeem, but keep them as a permanent fund of credit. The obvious consequence, therefore, of too liberal a provision for the poor, must be to increase their number; and by holding out a temptation to the neglect of economy, indirectly to corrupt their morals, by encouraging luxury, profligacy, and every species of low debauchery.

In Scotland, except in towns, it may be truly said, that there is no provision at all for the poor; and yet there are few or no countries where they are less numerous, and more humanely attended to. The general views of the Scottish legislature, respecting the poor, were most just and laudible. Their aim was to guard, as far as human foresight and prudence could do, against idleness and profligacy, as being the immediate harbingers of poverty, distress, and degradation. They took care to make provision for the poor, but it was only for the sober and industrious poor; while they threatened, with their utmost vengeance, all vagabonds, vagrants, sorners, sturdy beggars, and masterless persons. In our oldest laws, upon this subject, it is expressly ordained, 'That none 'be permitted to beg betwixt the ages of 14 and 70, until, af-'ter examination, it be found that they are not able to gain a 'livelihood otherways; when they are to receive badges, to 'entitle them to beg; and all others are to apply themselves 'to work, under the pain of burning on the cheek, and ba-'nishment.' Acts, 1424, 1457, 1503. And by a subsequent act, in 1535, none were permitted to beg, except in the parish where they were born. And by act 1551, none are permitted to be served with alms, except those who have badges. To encourage the same idea of industry and frugality, by an act in 1617, 'indigent children going about idle, may be com-'pelled to serve any of the king's subjects without wages, till 'their age of 30 years.'. And, by an act passed in 1663, vagrants and sturdy beggars may be also compelled to serve any

manufacturer. As persons of this last description were generally of such depraved characters, and had contracted such habits of idleness, few were willing to receive them into their service; therefore, by an act passed in 1672, cap. 16. workhouses are ordained to be built for setting them to work. The acts against vagrants, and, as they are termed, 'strong and 'idle beggars,' are innumerable. And it is a curious historical fact, that, under this denomination, are comprehended, by act 1579, 74, 'Vagabond scholars of the Universities of 'St Andrew's, Aberdeen, and Glasgow, not licensed to ask 'alms.'

But while the general spirit and tendency of all our statute-laws, relating to the poor, set the strongest brand of infamy upon idleness and profligacy, their humanity and liberality are no less conspicuous. By act 1535, c. 22. the poor, who cannot work, must be maintained by the parishes in which they were born; and when the place of their nativity is not known, it is ordained, by acts 1663, cap. 16, and 1698, cap. 21, that the burden falls upon the parishes where they have had their most common resort for the three years preceding their being apprehended, or their applying for the public charity. And this period of three years residence seems now to be generally adopted, as being that which gives a title to parish maintenance, whether the place of their nativity be known or not.

Magistrates and Judges are authorised and ordained to take up a list of the poor in their several parishes, and to send them to the parishes to which they belong, where houses are to be provided for them, at the public expence, either separately, or with others; and for their maintenance, if circumstances should so require. The whole inhabitants of the parish, without exception, are appointed to be taxed or stented, according to their substance, for such weekly charge and contribution as shall be thought sufficient to sustain the said poor. Act 1579, cap. 74. This power of taxing and stenting for the poor, is again, by act 1663, cap. 16. vested in the heritors, with this addition, that the poor, who are able to work, are to be offered to any within the parish, who will receive them, who are to have their work till they attain 30 years of age; and failing of being so provided for, they are to be sent to the house of correction. Confirmed by act 1672, cap. 18.

Whether it was owing to heritors becoming remiss in stenting themselves and their tenants for the maintenance of the poor, or that any circumstance of public utility required it, it is enjoined, by an act of Privy Council, 11th Aug. 1692, that the ministers and elders of every parish shall be joined

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in commission with the heritors, when they meet to assess themselves and their tenants, for maintaining the poor; and in that act there is this important clause, 'Whoever shall 'give alms to any beggar not of the parish, and shall not seize '(or cause to be seized) the beggar, to be sent back to his 'own parish, shall be fined in 20s. to be applied to the use 'of the poor.' This, and several other acts and proclamations of Privy Council, are confirmed and ratified by acts 1695, cap. 43, and 1698, cap. 21. So that this power of ministers, elders, and heritors to meet, when necessary, and stent themselves and their tenants for maintaining the poor of the parish, who are unable to work, stands unrepealed in the statute-book, as a part of the statute-law for the management of the poor; and by these laws the heritors can only claim the one-half of the contributions collected at the church, to be publicly applied for that purpose.

Notwithstanding that the latest unrepealed acts of our Scots Parliaments evidently authorise this stenting or taxing, when absolutely necessary, yet the good sense of the nation seems to have declined this pernicious system, at least in country parishes; and it may be now said to have nearly gone into disuetude, as a measure of common and ordinary regulation. There are only a very few parishes in Scotland, where this system of taxation for the poor prevails; and these, to their sad experience, feel the bitter consequences of it, in the increase of their poor and poors rates, and all the consequent idleness, profligacy, and want of foresight and frugality, which must ever accompany a too liberal provision for the poor in any parish.

So little is it now supposed that there is any law existing, for obliging heritors and tenants to assess themselves, for maintaining the poor, that when a farm is to be let in lease, it never once enters into the head of either the one or the other, that they will have a single shilling to pay on that account, during the currency of the tack. A tenant takes the farm as dear as if there never had been a law made to that purpose, and he sits secure, that nothing, but some extraordinary public calamity, will ever occasion these laws to be executed.

Except in the cases to be afterwards mentioned, there is, perhaps, no country in the world, where the poor are more humanely and carefully attended to, than in Scotland, and at less expence. For time immemorial, the contributions collected weekly, at the parish churches throughout the country, have been their only fund of support; and this fund is almost, if not altogether, left under the management of the ministers and elders of the country parishes, who receive the

collections, appoint the distributions, as the necessities of the poor may require, meet quarterly or annually, to settle and ballance their treasurer's accounts; and all this without any fee or reward whatever, except the consciousness of doing good. In some parishes there are some small funds in money, arising either from former savings, or legacies bequeathed to the poor, by charitable and well disposed persons. But even with these it would appear, from Sir John Sinclair's Statistical Account, that the expence of maintaining the poor, in country parishes, seldom reaches farther than from 10l. to 20l. a year; and yet, with this small provision, joined with the private charity of the inhabitants, the poor are well supplied, and live comfortably.

The most beneficial effect of this system is, that, being in itself so small, people in the lower ranks of life, never look towards it, as their resource, under sickness and old age. Indeed, the accepting of charity is purely a matter of necessity with them, and not of choice; where it is almost invariably considered as degrading and demeaning the character, from being the effect of sloth or thriftlessness in the former period of life. So great, commonly, is the horror, or aversion entertained upon this subject (of receiving charity), that the most humiliating and unsufferable term of reproach that can be cast upon any one, is, that their parents or near relatives were supported by the Session, as it is called; that is, from the public collections at the church, which are under the management of the minister and elders of the parish, who compose the session or consistory of the parish. So powerful is this sentiment among people in the lower ranks in Scotland, that, in order that this odium may never fall upon their offspring, they study to live with the utmost frugality, that they may be able to give them some education, accustom them early to habits of industry, or place them out to trades; and, at the same time, to save something for old age, and to bury them decently, without being obliged to depend on public charity at that momentous crisis. To have wherewith to purchase a coffin and a winding-sheet, if they should have nothing more, is the height of their ambition. Such is the happy influence of wise regulations, in forming the characters and manners of mankind!

It will readily be conceived, that what has been observed just now about the state of the poor, is chiefly applicable to the poor in country or landward parishes. In cities and great towns, they are under different regulations and management from those in the country. From the dissipation and corruption of manners that are incident to towns, it is at once evi-

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dent, that the poor will be more numerous. A combination of other circumstances may also increase their number; and it is owing to that unavoidable increase, that any thing like the English system of poor-laws takes place in Scotland. There, houses of various dimensions and descriptions are erected, and endowed for their accommodation, where they are maintained at the public expence, with almost no care or concern of their own. These erections are sometimes made and maintained from funds individually appropriated to that purpose, and others are made at the expence of the community at large, being a tax laid upon the inhabitants for their support. From one or other of these several establishments, the poor, in towns, are entitled to claim a maintenance.

The collections at the church, as in country parishes, being by no means adequate to the support of these expensive establishments, when these are exhausted, a tax is imposed upon the citizens, to supply the deficiency; and in consequence of this, the whole management, and all the regulations respecting the poor, devolves upon the Magistrates, or persons authorised by them for that purpose. One of these regulations now generally adopted, is, that public begging or asking alms, in towns, is strictly prohibited. The poor are either received into the public establishments provided for them, or they receive a stipulated supply in their own houses, according as their situation may require. Many of these poor in towns, and large villages, who have been long inured to habits of profligacy and dissipation, not possessing that delicacy of sentiment above described, as peculiar to the poor in country parishes; and being either dissatisfied with the provision allotted to them, or uneasy, under the restraint of not being permitted to beg in town, sally forth, in swarms, into the country, and raise contributions, by their lies, their whining, and clamorous importunity, upon the compassion and generosity of the inhabitants. And what chiefly adds to this scene of perpetual aggression and disgust, is, that it is not always upon the most necessitous and pitiable objects of distress, that these charitable contributions are bestowed; but upon a parcel of idle vagrants and vagabonds, who commonly resort with their plunder to gin shops and dry quarters, where they indulge in all the filthy orgies, and low buffoonery and obscenity, so well described by Burns, in his poem of the *Taterdemolians*.

It is impossible to conceive a more disgusting nuisance, or a more pernicious evil in society, than the permission of these vagrant beggars, that every day pour upon the country, like swarms of devouring locusts, from all the adjacent towns and villages.

villages. They consume the provision that ought to be applied to the parochial poor, who, if it were not for them, could be far more liberally supplied, and the burden of supporting them would never be felt. They spread and encourage vice and idleness, and, by the frequency of their repetitions, they chill the very feeling of charity itself. But what chiefly is connected with your department, these gentry ought to be considered as so many idlers, who prey upon the labours of the industrious, and by which they become doubly pernicious, both from their being non-productives, and also from their withdrawing their services from the labour of the field, at a time when labourers are in so much request.

There is no part of police, or of political regulation, that calls more loudly for immediate redress than this. It is an evil that is every day encreasing, and will continue to increase, in proportion as the wealth, the population, and the manufactures of the country increase in the cities and great towns. The greatest service that can be done to the state, and to the vagrant poor themselves, is to confine them strictly within the bounds of the parishes to which they severally belong. And it is a most happy circumstance, that this can be done in the most speedy, effectual, and easy manner possible. The remedy needs only to be mentioned, in order to be administered.

We have seen, from the foregoing statement of the statute-law of Scotland, that all Magistrates and Justices of the Peace are empowered and enjoined to see that the poor shall be rigidly confined to the parishes to which they belong; and when they find them transgressing, they are charged to commit them to hard labour, in the house of correction; and all who are found giving them alms, are to be fined in the sum of 20s. for the use of the poor of their own parish.

Let Justices then, at their Quarter Sessions, appoint, in the first place, a considerable number of constables in every parish. Let it not only be an important part of their instructions, to apprehend vagrants, but let them regularly call the constables before them, at their quarter or annual meetings, and enquire strictly into the faithful discharge of this part of their duty, and fine or punish them severely, when they find them negligent. Let the constables also be obliged to give an account (upon oath, if they be desired), if they know of any one who has given alms to any vagrant poor, and let the fines (upon all transgressors) be exacted in its fullest extent. If gentlemen would only take the trouble to do this (and they ought positively and seriously to do it), vagrant beggars would instantly disappear in this country, as if they never had had existence.

Your

Your magazine, I find, is becoming every day more popular, and acquiring a most extensive circulation. Under these circumstances I consider it as an obligation incumbent on you, to remind the Justices of Peace of their duty, and to point out the lamentable consequences attending the neglect of it. In doing those things, you will oblige many of your friends, and, in particular, your humble servant,

AGRICOLA.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On ascertaining the quality of Lime.

SIR,

I know nothing of more importance, less attended to by Farmers in general, than the quality of lime. Not unfrequently in driving home, what they understand to be a thousand loads of lime, they are unknowingly bestowing their money, their time, and their labour, on a disguised substance, the half of which is sand or clay. This disguise too, can seldom be detected by the eye, or any of the other organs of perception. Plain directions therefore for discovering the qualities of lime, it is believed, may not be unworthy of the notice of your readers.

Lime is an alkaline salt of such a nature, that if quite pure, it may be wholly dissolved in any strong acid or vinegar. It melts as completely away in this menstruum as common salt or sugar, or any other essential salt of vegetable substance do in water. Hence, it is very easy to try the comparative value of two or more pieces of limestone from different quarries. Buy a bottle of muriatic acid, which may be obtained from any Laboratory. Then weigh out equal quantities of the limestones, the comparative quality of which you mean to ascertain, mixing together a due proportion of the different seams or strata, that are commonly wrought in each quarry. That limestone which leaves least sediment when dissolved, is of course the best.

There can be no comparison made however, if you take unburnt limestone of one rock, and burnt stones or slacked lime of another. Each portion for trial, must be precisely in the same state. For all pure unburnt limestones, contain about two-fifths or 40 per cent of their weight of air (carbonic acid gas,) which is expelled by burning. Of consequence, a given weight of burnt limestone, provincially called lime-shells, must contain a proportion equal to this, of more refuse than the same weight of unburnt rock. Moreover, by the knowledge of the exact loss of weight occasioned by burning, a calculation may be made of the expediency of driving home limestone, to be burnt in some cases

caſes where the fuel is only to be got near home. In general, it is moſt profitable to carry off limeſtone as ſoon as burnt, in order to avoid weight of carriage, becauſe, whenever it again grows cold, it begins to imbibe its carbonic acid from the atmoſphere.

If lime is not pure, it is obvious that it will loſe a great deal leſs weight in burning than pure lime. Hence ariſes another criterion for trying the goodneſs of lime-ſhells. The lighter they are for their bulk, or the more weight they loſe in burning the better. Weigh a piece of limeſtone, burn it properly, then weigh it again. If it has loſt as much as two-fifths of its weight by burning, it is good lime.

Unburnt limeſtone ſeldom contains more than eighty per cent. of pure chalk or carbonate of lime. Pitleſſie quarry in Fife belonging to Mr Low of Annfield has one Stratum containing 99½ per cent of carbonate of lime, which is the pureſt limeſtone I have ever heard of. Perhaps, however, ſome fine marbles may be even more pure.

The colour of lime is no criterion of its goodneſs; for inſtance, Aberdour lime, which is blue, was found, on a comparative trial, to be richer than a quantity of Sunderland lime, which was of a bright white colour, indicating purity in the general opinion.

Another method of trying the comparative goodneſs of lime, is by aſcertaining what quantity of proper mortar fit for building (and which ſhould fall readily off the maſon's trowel) can be made from a given quantity of lime-ſhells. As this may be done eaſily on a large ſcale, it is, in my humble apprehenſion, the beſt method of trial, becauſe a large quantity of lime moſt generally contains a due mixture and proportion of all the different ſtrata of the rock which are frequently exceedingly different in quality.

Some limes require no ſand at all to make mortar for building; and theſe are eſteemed by intelligent maſons the beſt for architecture, as making the ſtrongeſt cement. But ſuch limeſtone, containing perhaps more than three fourths of its bulk of ſand, can ſeldom be applied with economy to the purpoſes of agriculture.

I was once judge of a comparative trial by maſons of two cargoes of lime-ſhells, each of which was accounted excellent. The one was from the neighbourhood of Aberdour of a quarry belonging to the Earl of Morton, the other from a quarry in the vicinity of Edinburgh. The lime-ſhells of Aberdour, when ſlacked, produced three times their quantity of powdered lime; and that powdered lime required three times its quantity of clean ſand to make good mortar for building. In other words, each boll of Aberdour lime-ſhells, by being watered, became three bolls of quick lime powder, and each boll of the powder became

good

good mortar with three bolls of ſand. Thus each boll of theſe burnt lime ſtones was converted into no leſs than nine bolls of building mortar, whereas each boll of the Edinburgh lime-ſhells, ſlacked to two bolls of powder, and each of the bolls of powder required only two bolls of ſand to make proper mortar. Thus the boll of Edinburgh burnt lime ſtone was convertible into no more than four times its quantity of mortar.

From what has been ſaid, will appear the vaſt difference in the qualities of limes that are even generally eſteemed good; and from the laſt mentioned comparative trial, it will be apparent to every one, that it may ſometimes be proper economy, where there are two places for obtaining limes, ſuppoſed in general to be of equal quality, though the one may be ſituated at double diſtance, or ſold at double the price of the other, to fetch it from the place at the greateſt diſtance, and of the higheſt price.

I am yours, &c.

A. S.

FOR THE FARMER'S MAGAZINE.

Letter from Mr William Pitt, concerning the Staffordshire Plough, with a Figure thereof, communicated by Sir John Sinclair, Bart.

SIR, *Pendeford, July* 10. 1803.

IN my account of Staffordshire ploughs, referred to in your letter, I believe I have used an inaccurate expression in the term '*single wheel plough*;' it should have been, *single furrow wheel plough*; and was meant to distinguish it from the double furrow, or two furrow wheel ploughs; for both are in common use in this country, and both are guided by two wheels, the one going in the furrow, the other on the unploughed land, much in the manner expressed in the drawing. Until about 30 years ago, the ploughs in this neighbourhood were universally swing ploughs, with a holder and driver, upon a good construction, and made good work. When the wheels were applied, no alteration took place in the construction of the plough, except pitching it a little deeper, (i. e.) more inclined to the soil, the excess of which is counteracted by the wheels. The swing plough, without wheels, is still used for short land, hedge sides, and ill formed corners, where a holder and driver are both necessary, on account of the frequent turnings, as the wheel plough is more liable to catch roots near hedges, or other powerful obstructions, whereby the shares might be bent, or the tool itself broken,

broken, which the holder of a hand plough, with a little care, may avoid.

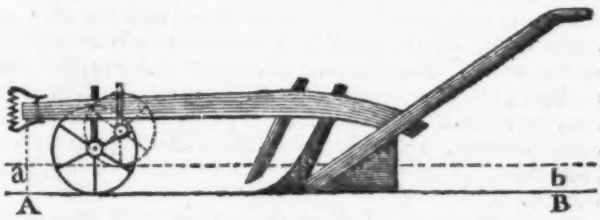
In all strait furrowed work, the single furrow wheel plough is an excellent tool for our land. It requires no holder, except turning in and out, at the end, which the driver does the instant the horses are upon the turn; at other times he walks over against the horses, whereby he keeps them in speed, and makes them labour equally. Is not this much better than walking behind the plough, and guiding with reins, which is the case in the Norfolk plough? A docile boy of 10 or 12 years old, will drive three horses in one of these ploughs, and plough an acre of land per day, in common work, and can do much more when exertion is necessary. The ploughing is performed five or six inches in depth, and if the tool be in good order, nothing can perform the work better; it is generally much superior to that done by the best ploughmen with the hand plough.

Respecting ploughing all sorts of land with two horses, the idea has always appeared to me absurd; the different proportion of resistance between a strong clay turf and a pulverised light sandy soil, will not be less than as five to one; therefore five horses are as necessary in one case, as a single one in the other. Three good horses are necessary to plough the gravelly or mixed loam of this country, an acre per day, five or six inches deep; and he who should persevere in attempting to do it with two, would lose more in horse-flesh than he gained in labour. The light sandy soil here can be ploughed with two horses, but those who have them, prefer working four horses in a two furrow plough; and a few instances occur of oxen working in these ploughs. The two furrow wheel plough is much used on the light soils, and drawn by four or five horses; but on the heavier soils, the plowmen are apt to plough too thin with them, in order to favour the horses; and at the ends they lay heavy upon the hind horse, or leave broad headlands. Some farming gentlemen use the Norfolk plough, particularly Sir George Pigott, Bart. and Henry Vernon, Esq. but the most attentive farmers in that neighbourhood, can perceive no advantage accruing therefrom; they had both ploughs and plowmen from Norfolk. An acre of land is ploughed here with the single furrow wheel plough, by going 11 miles along the furrow, and nine inches wide, which is an acre without a fraction. This, at two miles per hour, requires five hours and a half, to which add one hour for turning, and half an hour for a bait, makes seven hours; which, with going to and from the field, forms an easy day's work. It is easy to see that more

land

land may be ploughed per day, if necessary. I answer your queries as follows:

1. The single furrow wheel plough has been introduced about thirty years.
2. A section of it is inclosed, with dimensions, &c.
3. The best way of sending one from this country to the north, would, I think, be to send it by inland water carriage to Newark on Trent; from whence, it might be conveyed in a stage-waggon. The price, new, wood and iron, would, I suppose, be less than three guineas.
4. The advantages of this plough are: It requires no holder, but only a man or boy, to attend the horses. It will perform well to any reasonable depth, the wheels being moveable, up or down, by a screw, or by notches.
5. It is not adapted to hedge sides, or land with strong roots, or powerful obstructions, for reasons already given.



EXPLANATION.

The line A B represents the bottom of the furrow; and a b, the surface of the ground, when the furrow is six inches deep.

From A to underside the beam, 16 inches.

Height of the furrow wheel, 18 inches.

Ditto of the landside wheel, 15 inches, represented by the dotted lines.

The scale of the drawing is three feet to an inch:

I am, Sir, yours, &c.

WM PITT.

FOR

FOR THE FARMER'S MAGAZINE.

Remarks on the Stafford wheel plough, described in Mr Pitt's letter to Sir John Sinclair, Bart. By Mr Alex. Trotter, overseer at Thurso east.

1. THAT all wheel ploughs are heavier to work than ſwing ploughs, is obvious from the following conſiderations. The wheels are of no uſe unleſs the plough has a certain proportion of more hold given either by the beam, the ſhare, or the line of direction, which, when added to the friction of the wheels, neceſſarily encreaſes the weight of the draught; or, which is the ſame thing, renders the implement uſed leſs capable of performing the intended operation. It is plain that wheel ploughs muſt be ſo conſtructed as to preſs upon the axis of the wheels; conſequently, that the head and ſhare cannot run in a horizontal direction with the bottom of the furrow, but, by forming a ſmall angle, cauſes the plough to go upon the point of the irons with a heel raiſed an inch or two from the ground. Every plough, whoſe cutting point is not in a line with the ſlice taken of, muſt have one power working againſt another; for inſtance, when the ſwing plough has more hold than neceſſary, the ploughman muſt preſs, with all his force, upon the ſtilts, to counteract it, which anſwers the ſame purpoſe as is accompliſhed by wheels. Now, a good ploughman rarely preſſes upon the ſtilts; therefore, every implement that requires ſuch preſſure, or which is the ſame thing, requires a ſupport at the other extremity, is more or leſs defective, conſequently gives a proportional increaſe of draught to the horſes employed to work it.

2. The advantages of wheel ploughs are, that when uſed upon irregular ground, or in croſs ploughing 18 or 20 feet ridges, two or three times gathered up; you may by placing the wheels immediately before the ſhare, go nearly at an equal deepneſs, at leaſt more ſo than can be accompliſhed with a ſwing plough: if the wheels ſtand at the point of the beam, it is impoſſible to make good work, for they will be over the crown of the ridge before it is touched by the ſhare, and going up the other ſide when the operative powers are coming down upon the furrow; which, at all events muſt occaſion bad work. In paring ſward for burning, wheel ploughs will execute the work to better purpoſe, than ſwing ploughs. This is incontrovertible.

3. As for the double furrowed plough, unleſs ſuch are uſed on a level dry field, I cannot diſcern a ſingle beneficial conſequence

quence that will be gained from them. They muſt be level in the ſole, and can neither caſt, cleave, nor gather a ridge; therefore are inferior to two ſingle ploughs, wrought by the like number of men and horſes. I alſo think, the latter will go eaſier, and make much better work.

4. That the driver will command the horſes better, walking alongſide of them, than at the tail of the plough, may be true, when horſes are wrought in a line; but, when yoked a-breaſt, the contrary is the caſe. In dry ground, horſes work with more effect in pairs, than in line.

5. An acre per day, Engliſh meaſure, is rather below a medium of work, eſpecially if the furrows, or ſlices, are taken at a nine inch breadth, and only five or ſix inches deep. Theſe are not proper ſizes when ploughing for ſeed, either on lea land, or ſtubble; and it muſt firſt be proved, that laying the furrow on its back, is a good poſition, for certainly a furrow of the ſize mentioned, will not lie in any other way. A furrow nearer the ſquare of whatever ſize it ſhall be, provided breadth and depth are ſuitably proportioned, will receive more benefit from the atmoſphere, ſtand more rain, and be eaſier reduced with the harrows, than where the ſlices are thin, and the original poſition reverſed.

6. It is true, that ſome fields are five times harder to plough than others; and that one horſe may give the ſeed furrow, to barley, turnips, or well wrought ſummer fallows; but, becauſe one horſe may be ſufficient in theſe inſtances, it does not follow that two are unprofitably employed, ſeeing that they are able to go at a faſter ſtep. I know of no cultivated land, but what may be ſufficiently wrought with two horſes, if the proper ſeaſon is choſen; and the only difference that I would make betwixt light and ſtiff ſoils, is, to go at a greater pace on the firſt than the laſt: Upon rough uncultivated land, the caſe may be different.

7. The figure of the plough, is nearly the ſame with our own, but when it is conſidered, that in ours two horſes work a-breaſt, and that according to the deſcription given, three are yoked in length, there muſt appear a neceſſity, for a great difference in the line of draught. This line, in a two horſe plough, is drawn from the eyes of the back-bands, through the point of the beam to three inches back from the point of the *sheath*; but the line of draught in the three horſe ploughs, where yoking in length is practiſed, muſt be taken from the ſhoulders, or back-band of the middle horſe, if they are of equal ſize; and even a line drawn from the middle horſe will be lower (in going to the ſhare), by two or three inches at the point of the beam, than the line drawn from the hind horſe. All this muſt be counteracted by the wheels, or by lowering

the back-bands, which, of courſe, occaſions an augmentation of friction and draught. This is one reaſon why ſo much power is required; and another reaſon may be aſſigned, viz. that if the figure is exact, the coulter is two inches higher placed than neceſſary; therefore, inſtead of cutting, can only tear the ground up. All which things ſerve to ſhew the imperfection of the Staffordſhire wheel plough.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Smut of Wheat.

SIR,

HAVING lately perused a communication by the late Sir John Call, to the Board of Agriculture, on the smut, or black in wheat, I am inclined to make a few remarks on the subject; because his experiments, in my humble apprehension, not only throw a new light on the matter, but differ entirely from that of your correspondent, A. Z. in your magazine of April 1801.

Both are agreed, that this disease proceeds from small insects, animalcula, bred in the ear of the wheat, and in this I am disposed to acquiesce. Yet there are philosophers that attribute it to minute parasitical plants, which they have discovered adhering to the smutted ears; though these are probably not the cause, but bred there in consequence of the rottenness of these smutted ears.

The followers of the latter doctrine, believing that the smut is propogated by the seeds of these minute plants, recommend washing the wheat intended for seed; and some think it should also be strewed with quick lime, before it is dry, after such washing.

Your correspondent, A. Z. also advises that seed-wheat should be washed. But all seem aware, that steeping seed in pickles of common salt, or stale urine, is attended with danger, and in some instances has occasioned the loss of the whole seed-corn.

Let it, however, be granted, that washing will carry off the minute seeds of such parasitical plants deposited amongst the grain, still a difficulty occurs as to the utility of washing. For, it is certain these small plants affect only the green ears, but do not affect the grain sown, or the roots of the wheat. Indeed, sometimes from the same root arise a smutted and unsmutted stalk; and even in the same ear there are found sometimes smutted and unsmutted grains. How then can it reasonably be believed that the smutted ears are derived from seed of minute plants, sown in the ground with the seed-

wheat?

wheat? The same observation applies, if the disease arises from the eggs of insects.

As well may the innumerable, and almost imperceptible insects that prey upon, and destroy a great proportion of the sap, leaves, and fruits of every tree, be supposed to be derived from the root of the tree; but with the root they have no connection, most of them becoming winged animalcula. The seeds of minute plants are also carried about by every breath of wind. The mould of cheese is discovered by the microscope, to be a forest in miniature, well supplied with inhabitants.

Sir John Call supposes, that the smut is occasioned by certain animalcula deposited in the husks of the ear, when the wheat is in blossom, which are fed and brought to perfection by devouring the milky juice; and he observes, that were the disease radical in the original grain of the seed-wheat, or infectious from the juice arising through the pores and tube of the stalk, there could not be, in the same ear, grains, some decayed, and others quite perfect.

To bring the matter to the test of experiment, Sir John collected a quantity of smutted ears of wheat, in some of which were two or more grains apparently perfect; all which he caused to be rubbed out with the hand in a bag, smut and altogether. The fresh grains found in the bag were then sown in a particular ridge, amongst other wheat, in a field under tillage. Their growth from the first was similar to the rest of the wheat, and from a certificate of respectable farmers, it appears their produce was as free from smut, as that of the field in general.

Hence the conclusion is drawn, that washing or pickling wheat, as a remedy against the smut, is unnecessary and useless; and that, as blights and other diseases of plants are more prevalent, from circumstances, in some seasons than in others, so the smut is an accident of a like nature, which mankind can neither foresee nor prevent.

The above doctrine may appear new and unsatisfactory to many respectable and experienced farmers, whose sentiments I would wish to learn before making up my mind on the subject. I only state the experiment of another, and bring it forward to your readers in the way that I think most plausible.

I am yours,

A. S.

NOTE BY THE CONDUCTOR.

We are ſtrongly inclined to believe, that the theory of Sir John Call will find few diſciples among practical agriculturiſts. Notwithſtanding that our ſentiments are directly hoſtile, we are obliged to Mr A. S. for calling the attention of our correſpondents to a ſubject of ſuch importance; and earneſtly requeſt that it may be taken up by ſome of our reſpectable friends. Farmers may differ about the beſt mode of pickling wheat, but one and all of them agree, that a preventative againſt ſmut is neceſſary. Indeed no perſon (at leaſt in North Britain), ſo far as our knowledge reaches, ever neglected pickling, without ſuffering ſeverely, at one time or other.

N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Cambridgeshire Fen Husbandry.

Sir,

As the following queries on fen huſbandry were lately ſent to me from a moſt reſpectable quarter, I ſhall eſteem it a ſpecial favour, if you will permit me to return anſwers to them, through the medium of your Magazine.

'What is the annual rotation and produce of the fen-lands?'

Anſwer. Firſt year, Coleſeed; which is generally a good crop, and this year ſells, when the crops are not above an average, for 6l. per acre, to be eaten on the land; and as graſs and turnips are ſcarce, good crops of coleſeed are likely to ſell higher ſtill. Indeed this invaluable nutricious ameliorating plant has been annually riſing in value, as butcher-meat has advanced in price; and there is no proſpect that it will fall much, ſo long as mutton and beef are dear. Coleſeed generally proſpers well on fens, moſſes, and all kinds of clays; and it is much to be lamented, that it is not more generally cultivated.

The patriotic noblemen and gentlemen of this country can ſcarcely render a more eſſential ſervice to the Britiſh empire, than to promote a very general cultivation of COLESEED on all ſoils that are too wet for turnips; becauſe coleſeed, when eaten on the land, amazingly enriches it for future crops, and its culture muſt cauſe butcher-meat to be more plentiful and reaſonable at markets.

Second

Second year, oats; which, after coleſeed, even in this dry year, were extremely bulky, and yield generally a laſt, or 84 Wincheſter buſhels, per acre.

Third year, oats. The crop almoſt as bulky, and yields nearly as much as the firſt; for the crops of oats, after coleſeed, are commonly too ſtrong the firſt year, and frequently the ſecond alſo.

Fourth year, wheat; which is frequently too rich, or bulky, and yields, on an average, 40 Wincheſter buſhels per acre. Fen wheat, when clean, makes excellent ſeed for high lands.

Fifth year, oats, with graſs-ſeeds. Even this crop is commonly very good; ſometimes as good as the firſt year, eſpecially if the ſeaſon is favourable.

Sixth year. Mowed for hay, and ſometimes ploughed and burned as ſoon as the hay is carried, and ſown with coleſeed again. At other times the land is grazed, one, two, or more years, before it is ploughed and burned, and then ſown with coleſeed.

'What is a crop of coleſeed worth, if kept for ſeed?'

Anſwer. A crop of coleſeed commonly produces from 30 to 84 buſhels, or a laſt of ſeed (the laſt is 84 buſhels, Wincheſter meaſure,) and ſells from 30 to 50 l. per laſt. It is common to eat the young plants firſt, with ſheep, and then let the ſtalks ſtand for a crop of ſeed: which makes coleſeed an extremely profitable crop to thoſe that cultivate it. A good crop of coleſeed is frequently worth as much per acre as the land that it grows upon; and as the ſeed is commonly ſold in July, the money comes very ſeaſonably, to enable many farmers to get their other harveſt forward.

Fen-grain of all ſorts, when clean from ſmut, &c. makes moſt excellent ſeed for all high lands; and it would be a reciprocal advantage to the fens and high countries, if the beſt fen grain was annually purchaſed for ſeed to other diſtricts.

The fen oats are good this year. The beſt of them ought to be purchaſed, to make oatmeal for the north, and for high country ſeed, and the worſt uſed for horſe-corn: As there are navigable rivers from all parts of the fens to Lynn and other ports, grain can be eaſily conveyed thither, at ſmall expence, by water carriage.

Some perſons of integrity, extremely well ſkilled in all kinds of grain, are willing to purchaſe fen oats, &c. and ſend them to the north, or elſewhere, on fair and honeſt terms, for a ſmall profit. If any Gentleman or Company chuſes to be ſupplied in this manner, a correſpondence may be opened immediately, and any quantity furniſhed. You will oblige me, by adding, that ſuch as are diſpoſed to make enquiries, may addreſs themſelves

to J. S———tt, to be left at the Poſt-Office, Chatteris, Cambridgeſhire, England, till called for, and they ſhall be ſpeedily anſwered. I am, Sir,

Your very obedient ſervant,

A Cambridgeshire Agriculturist.

Thoughts on the Management of Dung.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

MANURE, taking the word in its broadeſt ſenſe, being the *ſine qua non* of good huſbandry, I truſt the following deſultory thoughts on the means of accumulating and preparing farm-yard dung, cannot be unacceptable to your readers.

The moſt ſuperficial obſerver in rural economicks muſt have often noticed, that a conſiderable number of practical agriculturiſts are inattentive, not only to the gathering of the raw materials, but alſo defective in the ſeveral ſteps of preparatory proceſs, before dung can be thriftily and ſuitably applied. With ſuch, very little care is uſed in cutting the corn-crops, which, properly ſpeaking, is the only ſource whence raw materials can be got. They are alſo too apt to diſpoſe of any hay which may be raiſed upon their farms, even when prices are not ſo high as to tempt a breach of good huſbandry. They often keep more beaſts on the premiſes than conſiſtent with the quantity of provender in hand, thereby reducing the ſtock of manure in an extraordinary degree. Beſides, ſeldom is any care beſtowed in laying up the dung in a regular and careful way, during the winter months, and ſtill leſs upon its ſtate during the exhauſting ſpring winds, or the parched heat of the ſummer months. Inſtead of ſtoring it up with regularity, and mixing the different kinds in a compact heap, it is ſuffered to remain as toſſed from the ſtable and byre; continues expoſed, in its rough ſtate, to the weather; is often inundated with water, and rarely touched till the cart arrives, to drive it to the field.

With your permiſſion, I mean to ſtate my ſentiments on the moſt proper methods of accumulating and preparing farm-yard manure; reſtricting myſelf to theſe points, becauſe nine-tenths of our huſbandmen have no other reſource for ſupporting and enriching their lands. I beg, however, that your readers would not expect any new information upon theſe important ſubjects; as, in fact, I intend only to detail the proceedings of various actual farmers, who are eminently careful to collect and prepare ma-

nure

nure. I certainly view ſuch practical details as infinitely better calculated to convey uſeful inſtruction, than abſtruſe diſquiſitions, or fine ſpun theories, reſpecting the food of plants, and the way in which ſuch are nouriſhed and ſupported. If manure is neceſſary to the well being of plants (a point diſputed by none in this age, ſo far as my knowledge reaches), then it is of ſmall importance to the farmer, how, and through what channel its virtues are communicated. It is beneficial, and that is enough. Therefore, all that is required, is knowledge how to increaſe the quantity, and uſe it in the moſt advantageous manner.

As ſtraw is the baſis of manure, one would be led to think that every good huſbandman would beſtow the moſt ſedulous attention upon the ſhearing or cutting of his crop, ſo as the greateſt poſſible quantity of the raw material might be procured. Very different, however, is the conduct of farmers in general; and over one half of Britain, it may be ſafely eſtimated, that at leaſt one-fourth of the ſtraw is left in the field, where its ſtrength is waſted and diſſipated by the rains and ſtorms that commonly prevail at the concluſion of autumn. In ſome diſtricts a ſtricter attention is now paid to this important operation, and it is to be hoped that ſuch an improvement will gradually extend over all. Independent of the additional grain gained, the increaſe of manure will more than compenſate the increaſed expence of reaping the crops in an accurate manner.

While I recommend, that the crop ſhould be cut low, in order that materials for making manure may be increaſed, I by no means contend for that degree of finical accuracy, which requires that not one ſtalk of the ſtubble ſhall be of greater height than its neighbour; a degree of perfection accompliſhed, perhaps, at a greater expence than can be repaid by the benefit derived, eſpecially when the value of labour is ſo enormouſly advanced. This kind of cutting can only be obtained, from putting a very ſmall quantity into the hook at once, and rarely makes a perceptible increaſe upon the bulk; whereas, by running the ſickle upon the ground, drawing a level ſtroke, and gathering no more into the hand than can be fairly cut, all the advantages of low ſhearing are obtained at a very trifling increaſe of expence. I am ſatisfied that, by a ſteady perſeverance in this practice, from one to two tons of manure (per acre) may be annually gained, more than what was procured in former times, eſpecially where the crops are good. This annual increaſe muſt operate powerfully upon the improvement of the country, the effects being preciſely ſimilar to thoſe of adding compound intereſt; and, of courſe, furniſhes the means of gradually rendering every acre of land in the kingdom fertile and productive.

The uſual modes of converting ſtraw into dung, need hardly

be mentioned. A good deal is conſumed in the houſe by draught horſes and milch-cows; much is applied to the littering of turnip-cattle; and the remainder is uſed by lean cattle, kept in the fold-yard. Notwithſtanding theſe being the general methods of conſumption, it will be neceſſary to divide my ſubject into two parts, viz. To the management of dung upon light lands, and heavy lands; becauſe manure on each is prepared in different ways, uſed at different ſeaſons, and applied to different crops. For light ſoils, manure requires to be much higher prepared than is neceſſary for clay ſoils; and every ſtep of the previous preparation, to be perfect, ought to be executed in a quite different manner.

For ſoils of the firſt deſcription, where turnips are taken as a firſt crop, dung can hardly be too well prepared; becauſe the nature of the crop to which it is applied, renders a complete incorporation with the ground abſolutely neceſſary, without which the young plants might be ſtarved at their very entrance into life. In the beſt farmed Engliſh counties, which have come under my obſervation, dung is often kept over year, in order that it may be perfectly rotted: and the late Mr Bakewell was in habits of not applying it till it was reduced to a ſtate ſomething like black ſnuff. I do not, however, approve of ſuch protraction; for, when the preparatory ſteps are conducted with judgment, there is rarely any neceſſity for keeping dung over year upon turnip farms; beſides, ſuch a delay cauſes a waſte of the article, and moſt likely diſſipates its ſtrength; at all events, a year's intereſt of the value of the increaſed produce muſt be loſt. In general caſes there is not much difficulty in preparing dung upon turnip farms; becauſe, in the drieſt ſeaſon, from the nature of the food uſed, ſuch a quantity of liquid paſſes from the animals, as to prevent burning, provincially *fire-fanging*, the greateſt obſtacle to the rotting of dung that can be experienced. If turnip dung is regularly removed; if it is properly mixed with the horſe litter, and other excrementitious matter accumulated upon the farm, it will be found an eaſy taſk to prepare all that is made by the middle of April, at which time the fold-yard ſhould be cleared. What is produced after that time, ſhould be ſtored up ſeparately; receive waterings, if the weather is dry, and be reſerved for clover-ſtubbles, or other fields that are to be dunged in autumn.

I have mentioned the middle of April as a good time for clearing the fold-yard; but this does not prevent the work from going partially forward through the winter, when ſuitable opportunities occur. When drove out of the fold-yard, the dung ſhould be laid up in a regular heap or pile, not exceeding ſix quarters, or four feet and one half in height; and care ſhould be

be taken not to put either horſe or cart upon it, which is eaſily avoided, by backing the cart to the pile, and laying the dung compactly together, with a grape or fork. It is alſo uſeful to face up the extremities with earth, which keeps in the moiſture, and prevents the ſun and wind from doing injury. Perhaps a ſmall quantity of earth ſtrewed upon the top, might alſo prove uſeful. Dung, when managed in this manner, generally ferments very rapidly; but if it is diſcovered to be in a backward ſtate, a complete turn over, about the firſt of May, when the weather becomes warm, will quicken the proceſs; and the better it is ſhaken aſunder, the ſooner will the end in view be gained.

A ſecluded ſpot of ground, not much expoſed to wind, and perfectly ſecure from being floated with water, ought always to be choſen for the ſcite of ſuch piles or heaps. If the field, to which it is to be applied, is at hand, a little after-trouble may be ſaved, by depoſiting it there, in the firſt inſtance; but I have always found it moſt convenient, to reſerve a piece of ground adjacent to the homeſtead, for ſuch a purpoſe. There it is always under the farmer's eye, and a greater quantity can be moved in a ſhorter time than when the ſituation is more diſtant. Beſides, in wet weather, and this is generally the time choſen for ſuch an operation, not only are roads cut up, by driving to a diſtance, but the field, on which the heap is made, may be poached and injured conſiderably.

The above is the moſt approved method of preparing dung upon turnip or light land farms, and a few words ſhall now be ſaid reſpecting the management neceſſary upon thoſe of a different deſcription.

Upon clay ſoils, where wheat forms a principal part of the crop; where great quantities of beans are cultivated, and few turnips ſown, unleſs for the uſe of milch cows, the rotting of dung is not only a troubleſome, but an expenſive affair. Independent of what is conſumed by the ordinary farm-ſtock, the overplus of the ſtraw muſt ſome how or other be rotted, by lean cattle kept in the fold-yard, who either receive the ſtraw in racks, or it is thrown acroſs the yard, to be eaten, and trod down by them. According to this mode of conſumption, it is evident that a ſtill greater neceſſity ariſes for a frequent removal of this unmade dung, (I cannot find out a better term), otherwiſe, from the trampling of the beaſts, and the uſual want of moiſture, it would compreſs ſo much as to prevent putrefaction altogether. To prepare dung ſufficiently upon farms of this deſcription, is at all times an arduous taſk, but ſcarcely practicable in dry ſeaſons; for if it once gets burnt (*fire-fanged*), it is almoſt phyſically impoſſible to bring it into a ſuitable

ſuitable ſtate of preparation afterwards; and, at all events, its virtues are thereby conſiderably diminiſhed. Laſt ſeaſon furniſhed ſtrong proofs in ſupport of what I am maintaining; for, owing to the goodneſs of the weather during the winter and ſpring months, leſs dung was driven out than common; and the conſequence was, that on few clay farms, dung was made half rotten, even where the moſt anxious efforts were beſtowed upon watering and turning it, when the ſeaſon advanced. The continued dryneſs of the weather was, to be ſure, an exception to that of common ſeaſons, and increaſed the difficulties which, at all times, are undergone in ſuch ſituations; but, had it been equally wet, as it was dry, the propriety of frequent removals would not have been leſs urgent. Straw flung out in conſiderable portions to the fold-yard, after being compreſſed by the trampling of cattle, becomes rather like a well packed ſtack, than a maſs of dung in a preparatory ſtate. The ſmall quantity of water and dung made by the animals, is barely ſufficient to cauſe a ſlight fermentation; and this ſlight fermentation, when the heap gets into a compreſſed ſtate, is ſure to bring on *fire-fanging*, as already ſaid; after which, its original powers can rarely be reſtored. To prevent ſuch an injury, no meaſure can be ſo ſucceſsfully uſed, as a frequent removal of this unmade dung, eſpecially if the weather is wet at the time. If people can ſtand out to work, you cannot have too much wetneſs when executing this operation; for there is always ſuch a quantity of the ſtraw that has not paſſed through the entrails of the cattle, as renders it almoſt impoſſible to do injury, in the firſt inſtance, by an exceſs of moiſture.

What I would therefore recommend, upon every clay-land farm, eſpecially thoſe of conſiderable ſize, is a frequent clearing of the fold-yard; and that the greateſt care ſhould be taken to mix the ſtable or horſe dung in a regular way with what is gathered in the fold-yard, or made by other animals, in order that a gradual heat or fermentation may be ſpeedily produced. Where the materials are of ſuch ſorts as I am now ſpeaking of, (that is, a ſmall quantity of dung, or excrementitious matter, and a large ſtore of unrotten ſtraw, only partially moiſtened), I am clear that no damage can enſue from putting horſes and carts upon the heap; nay, I rather think, that a poſitive benefit will be gained from this ſlight compreſſion. I am, at the ſame time, well aware that the ſentiments of many able and judicious farmers, are different from mine on this point; they being of opinion, that the natural preſſure of the materials is quite ſufficient, and that any more is accompanied with injurious conſequences. I am, however, ſatisfied, that ſuch ideas are unfounded; having tried both methods upon an extenſive ſcale, and, from the

the reſults, feel myſelf juſtified in recommending the above mode of management. Perhaps this difference of ſentiment may ariſe from not attending to the very different qualities of dung on different farms; for I have already fully recognized the propriety of abſtaining from putting horſes and carts upon ſuch heaps or piles, containing materials which can be called dung, even tho' it may be in an unripe ſtate. I contend, however, that no injury is ſuſtained from ſlightly compreſſing a maſs of rough materials, nay, that ſuch is attended with beneficial effects; for, if the materials were laid up with a fork, or a grape, as is recommended in the caſe of turnip or half rotten dung, the ſmall portion of moiſture therein contained, would ſpeedily be waſted or evaporated, a circumſtance which I have repeatedly witneſſed, eſpecially when dry weather ſucceeded the period when the heap was made up. Beſides, driving a one-horſe cart over a ſurface of materials only one ſtage removed from the condition of dry ſtraw, will never prevent fermentation. If left in the fold-yard, I grant that the conſtant treading of the cattle therein confined, and the daily increaſed weight of the heap would undoubtedly produce that evil; but ſuch is effectually prevented, by frequent removals, eſpecially if rainy weather prevails at the time. Few objects deſerve to be more ſedulouſly attended to by every farmer who ſtudies his own intereſt.

The heap or pile, as already recommended, in the caſe of turnip dung, ſhould be formed in a ſecluded ſpot, if ſuch can be got at hand; becauſe, the leſs it is expoſed to the influence of the ſun and wind, ſo much faſter will fermentation proceed. It ſhould be conſtructed on a broad baſis, which leſſens the bounds of the extremities; and ſeveral ſeparate heaps are neceſſary, ſo as too much may not be depoſited at once, which, to a certain extent, would bring on the very evil I have all along been endeavouring to avert. By ſhifting the ſcene frequently, and allowing each covering or coat to ſettle and ferment, before laying on any more, the moſt happy effects will follow, and theſe heaps (I mean all ſuch as are completed before the firſt of May) may reaſonably be expected to be in a fit condition for applying to the ſummer fallow fields, in the end of July, or firſt of Auguſt. If the external parts get dry at any time during the proceſs, it is proper to water them thoroughly, and in many caſes to turn over the heap completely. I may add, that I have repeatedly experienced great advantage from laying a thick coating of ſnow upon ſuch heaps, as, by the gradual melting thereof, the whole moiſture is abſorbed, and a ſtrong fermentation immediately follows.

I would continue the ſame method of management during the ſummer months, ſo far as circumſtances permitted, though it rarely

rarely happens that dung collected at this advanced period is fit for uſe in the ſame ſeaſon, unleſs it be ſuch as is made by keeping horſes or cattle in the houſe, upon green food. Perhaps, as a general principle, it is proper to thraſh out all grain before ſummer arrives, (a ſmall quantity for litter and other purpoſes excepted) in order that the full value of the raw materials, when converted into manure, may be gained. Straw thraſhed in the ſummer months, always wants a good deal of its original ſtrength; it is broken and haſhed by the mills, therefore a large portion muſt at once be thrown to the fold-yard, where its ſtrength is ſtill more exhauſted and diſſipated. Even when ſtacked carefully, it will be found next winter, to produce much leſs bulk of dung, than if it had been uſed at the proper time: and intereſt of the amount for one year is loſt; all which things added together, will be found equal to one half of the original worth.

Upon large farms, where the management of manure is ſufficiently underſtood and practiſed, it is an important matter to have dunghills of all ages, and ready for uſe whenever the ſituation of a field calls for a reſtorative. No method of application to clay ſoils, however, is ſo beneficial as during the year of ſummer fallow, though, in ſuch ſituations, a greater ſtock of manure is often gathered than is required for the fields under this proceſs.

After all, it muſt be acknowledged, that, under every exertion, it ſeldom happens that dung on clay farms, where turnips are not grown, can be ſo well prepared as upon thoſe employed in the culture of that beneficial root. This has induced many farmers to croſs nature, and attempt the cultivation of turnips, upon ſoils phyſically unfit for producing them with advantage; and perhaps, much money has been loſt in carrying ſuch ſchemes into execution. I am clear, that a clay land farmer, had better ſubmit to all the diſadvantages accompanying the preparation of manure in his particular ſituation, than try to get free of them by the culture of turnips. It is alſo a conſolatory circumſtance, that clay ſoils have a good digeſtion, they are not ſo nice in their food as gravels and ſands, requiring only a good belly-full and frequent meals. It likewiſe deſerves attention, that dung applied to a clay fallow at the end of ſummer, has full time to incorporate with the ground, before the crop, ſown thereupon, ſtands much in want of its invigorating ſupport, conſequently, though of apparent inferior quality at the time of application, may, in reality, be poſſeſſed of equal powers for fructifying the ground, as if it had reached a higher ſtate of preparation.

Allow me to notice the many inſtances of ſlovenly neglect, which I have witneſſed in our ſiſter kingdom, reſpecting the management of manure, particularly in the mid-land counties,

where

where graſs huſbandry is extenſively practiſed. In theſe diſtricts, it is very common to uſe a conſiderable proportion of their hay in the fields, during the winter months, inſtead of conſuming it in the houſe or fold yard, where the manure produced, could readily be collected, and properly cared after. Sloth and waſte are the parents of this cuſtom; a cuſtom which ought to be interdicted by every proprietor who is diſpoſed to regard either his own intereſt or that of the country, much of the article being abſolutely rendered uſeleſs by the feet of the beaſts ſo maintained, while the ground is moſt unequally and partially dunged; this at to ſay, the richeſt and drieſt parts are ſure to receive the greateſt ſtore.

In my next, I propoſe to trouble you with a few thoughts on the *application* of dung, a ſubject of much importance, though certainly ſecondary to the one which has at this time occupied my attention. I am, Sir, yours, &c. ARATOR.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Letter from Sir George S. M'Kenzie, Bart. containing a few hints reſpecting the preſent price of labour in the Highlands.

SIR,

I WAS lately much ſurpriſed to find, that the eſtimate of a houſe and offices, on a very moderate plan, intended to be built on an improveable farm, exceeded conſiderably one year's rent of the eſtate of which it is a part. This inſtantly led me to conſider the very ſerious evils which have ariſen, in conſequence of country gentlemen not endeavouring, by a general agreement among themſelves, to lower the extravagant demands of workmen, and to check combination to raiſe their wages. While the price of building is ſo high, it is out of the landlord's power to give his tenant even ſuch accommodation as may be abſolutely neceſſary, without raiſing the rent to ſuch a pitch, as, together with the preſent coſt of every ſpecies of labour, totally to prevent the tenant from gaining a decent livelihood. But the greateſt evil ariſing from the exorbitant demands of maſons and other craftſmen in this country, is chiefly felt when waſtes are to be improved; for, in this caſe, no return can be expected for ſome years after improvement is begun, and conſequently the outlay of money in buildings, eſpecially on entailed eſtates, becomes a very ſerious buſineſs *. The expence of management, in a farm of any extent, has become enormous; but in ſmall ones, it is almoſt intolerable I do

* The wages of maſons in Roſs-ſhire, and I believe in the neighbouring counties, equal what is given to the beſt hands in Edinburgh, viz. 3s, and 3s 6d per day.

do not intend to enter into the conſequences of this; I may ſay, however, that it is probable the ſyſtem of paſturage will increaſe, till ſuch time as corn becomes a ſcarce commodity. When corn becomes ſcarce, its price may induce farmers to break up their paſtures: But for the diſcuſſion of the manner in which the prices of meat and corn come to balance each other, and other points of political economy connected therewith, I have not at preſent leiſure; nor, if I had leiſure, have I ability. My principal object in troubling you with this letter, is, to propoſe, what I think would be a valuable addition to the Farmer's Magazine, to form which, I doubt not of your receiving very ample materials from your numerous readers and correſpondents: My propoſal is this, That, to the other valuable matter uſually contained in the Magazine, be added, a report from every county in Scotland, of the price of labour, not only in each individual county, but in different diſtricts of the ſame county. To this muſt be added, the prices of meal, meat, and bread.

In detailing the prices of the different kinds of labour, the prime muſt be diſtinguiſhed from ordinary hands, and the prices of piece-work ought to be noticed. All theſe might be reduced into the form of a table, which, if you approve of my propoſal, I leave for you to conſtruct in ſuch a form as ſhall be, in your own opinion, beſt ſuited to the ſize of the work.

It would be an inſult to your judgment and good ſenſe, to detail the advantages which the kingdom will derive from the exhibition of theſe reports. I will not therefore take up your time longer, than to expreſs a hope, that government will endeavour to obviate an evil, which, without great caution, will undoubtedly ariſe out of the magnificent projects for the improvement of the Highlands: That evil is raiſing the price of labour. If wages are given by government, higher than the average of the whole Highlands, the moſt ruinous effects will follow. I have made an attempt to have this hinted to thoſe appointed to manage the money already voted for the grand purpoſes alluded to; and mention the circumſtance now, that the evil, which perhaps may not have been thought of by many in their enthuſiaſtic eagerneſs for the accompliſhment of the Caledonian canal, and other undertakings, may be obviated by united precautionary meaſures. I am, Sir, your well wiſher and humble ſervant,

Coul, 20th Dec. 1803.

GEORGE S. MACKENZIE.

NOTE BY THE CONDUCTOR.

WE cordially agree with our reſpectable correſpondent concerning the evil attending the late enormous riſe upon the wages of

of Maſons and Carpenters, thinking it unfriendly to rural improvement, as new erections of every kind muſt thereby be impeded and diſcouraged. If that riſe can be ſhewn to proceed from illegal combinations among the work people, it might eaſily be ſtopped by putting the law in execution; but we ſuſpect that this is not its ſource. Perhaps the evil ariſes out of the circumſtances under which the country is placed, and cannot be removed ſo long as theſe continue to operate.

Our correſpondent, when mentioning the increaſed expence of buildings, might alſo have noticed the very great riſe which, in conſequence of the war, has taken place in the price of wood. This we believe, has occaſioned as much advance upon the expence of new erections, as the increaſed value of the workman's labour. A year's rent of an eſtate is a very moderate allowance for farm buildings, when new houſes and offices over the whole are neceſſary; but this charge is ſeldom repeated, ſeeing that the taſk of ſupporting them, at leaſt in Scotland, is uniformly born by the tenant.

We ſhall be happy to lend our aid in bringing forward a correct ſtate of the value of labour in every diſtrict, and requeſt that our reporters will kindly favour us with the neceſſary materials. At the ſame time we muſt hint that our ideas are hoſtile to every reſtriction upon the value of labour, from a conviction that perfect freedom ſhould ſubſiſt in every thing of that kind; and that, like trade, labour ought to be left to find its own level. N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Augmentation of Stipends in Victual.

SIR,

TILL the deciſion of the Houſe of Peers, in the caſe of Milligan of Kirkden, about 30 years ago, it had been held as an opinion by the Court of Seſſion, as commiſſioners for plantation of Kirks, and valuation of tiends, that an augmentation of ſtipend could not be given, unleſs a *century* had elapſed from the former one; and that of Kirkden being refuſed on this ground, the judgment was reverſed on appeal, finding this objection alone not ſufficient. But the houſe of peers certainly never dreamed that this judgment was to give a handle for asking augmentations ſo often as has been done ſince; for example, twice in an incumbency, often at no great diſtance one from another, and before the incumbent could be ſaid to be old.

Before the 1748, when Scotland was freed from the vaſſalage ſhe was under to her military barons, there was little money

ney in the country, and rent was generally paid in grain, services, and casualties: While this was the case, there was some reason for giving *victual stipend*, and when augmentations came so seldom about as once in a century, proprietors did not think of obtaining decreets of valuation and sale of their tiends; but now when the tiends of a whole parish are valued in money, and all the rents paid in it, I can see no *termini habiles* for the court to give victual stipend, but an unanswerable one why they should not. The clergymen, indeed, who, in the case of the augmentation of Kirkden, acted as one body, and consider themselves as such in every case of stipends, or manses, or glebes; finding that the proven tiend must ultimately bound their augmentations, have endeavoured to get the better of this, by asking the late augmentations in grain. But if in an year like this, when grain is low, the court should give within a few pounds of the proven tiend of a parish, by the decreets of valuation; and if years like the 1800, and 1801, or even a rise of 6d. or 1s. a-stone of meal should take place, the clergymen would obtain more than the proven tiend, that is, more than the law allows. It is therefore the interest of the heritors to oppose every claim of victual stipend in future, on this account, as grain, on an average of years, must rise progressively, although it may have some ups and downs; nor, as their tiend is valued *in money*, which is the fund for taking the stipend out of, can it, I apprehend, be given *in victual*, if objected to. That the exhausting the tiend is yet only matter of speculation, is no answer: In New Luce, Wigtonshire, the free tiends of the parish are already exhausted: In Terregles, county of Kirkcudbright, the locality was in agitation about the time of the last rise of grain, and it was found the sum modified would more than exhaust the tiend, part being in grain, if at the fiar conversion, and many others are fast approaching. The advantage of the late public scarcity to the clergymen who had victual stipend, was from 45l. to 145l. each, *per annum*, or 95l. each yearly, on an average. This too, often came upon tenants to pay, who had their own meal to buy, in the moor country; whilst every minister has four acres of good ground for a glebe, and many of them, where there were Kirklands, obtained a considerable deal more, as grass for a horse and two cows; or where it could not be said to be arable, four soums pasturage, for each acre of tillage land, and by the improvement of land, these are mostly all made arable, therefore they cannot be said to be unprovided for victual. As there seems no ground for giving victual augmentations, and as proprietors and farmers have now the facts before them, and know the intentions of the clergy, it is their own fault if they allow themselves to be taken by surprise. Yours, &c.

A——N.

The Writer of the following Paper considers the Farmer's Magazine as by far the most useful Periodical Work which has appeared in this country, on the subject of Agriculture. As there are above Four Thousand Copies of it dispersed over the Kingdom, he gave his MSS. to the Proprietor of the Magazine, who, in return, furnishes him with Copies, to be sent to Members of Parliament. If any Gentleman wish for more information, he will give it cheerfuly, as far as he is able; and, as he has given his own name to the public, he hopes that those who differ from him in opinion, will also avow their names; or, if they write anonymously, that they will express themselves in temperate language. When men are united in their wishes to promote the good of the Public, differences in matters of opinion may be maintained with mutual esteem, and in the language of good humour.

FOR THE FARMER'S MAGAZINE.

A general view of the taxes on Malt, as imposed both in England and in Scotland. By George Skene Keith, D. D. minister of Keith-hall and Kinkell.

As it does not appear to me that the real merits of the dispute, respecting the proportions of duty to be paid for English and Scotch malt, have been properly understood, I shall endeavour, in this paper, to give a comprehensive and impartial view of the subject. For this purpose, I shall,

I. Give a short sketch of the history of the malt tax, as far as regards the proportion of the duty imposed on English, compared with that on Scotch malt.

II. State some facts respecting the different values of English barley, compared with Scotch barley, and with Scotch bear or big: and also of this last compared to Scotch barley.

III. Offer some remarks on taxing malt in general: And,

IV. Offer some remarks on the proportion of taxes that should be established between English and Scotch malt, whether from barley, or from bear or big.

After which, I shall give, in an appendix, a particular account of a number of experiments which I made last summer, in order to ascertain, by distillation, the comparative values of different quantities of malt, made from Scotch bear or big, and both from Scotch and English barley.

I hope, that if these different divisions do not enable me to exhaust the subject, they will at least assist the reader's memory, will point out to him where any particular topic is

handled, and will enable him to discover any error into which I have fallen from inadvertency, or inability; for I am not conscious of any misrepresentation, either in point of fact, or of argument. I am,

I. To give a short sketch of the history of the malt tax, as far as regards the proportion of duty imposed on English, compared with that on Scotch malt.

When the commissioners of the two kingdoms were employed in adjusting the terms of the Union in 1706-7, the taxes on malt, and malt liquor, gave rise to considerable discussion; and if the matter had not been compromised, or understood to be settled by the wording of certain articles, the Scotch commissioners would not have agreed to that treaty, which has been found so beneficial to both kingdoms. It is necessary to state concisely both the cause of the dispute and the nature of the compromise agreed to.

Scotland had been accustomed both to a malt tax, and to a tax on malt liquor, for nearly half a century before king William alone succeeded to the government, on the death of queen Mary. The tax on the ale, or malt liquor, was not generally complained of, being either charged moderately, or compounded for on reasonable terms by the publicans; for there were no common brewers in Scotland at that period. The tax on malt was very generally obnoxious, as it affected private families; not only from the amount of the tax, but by introducing excise officers into their houses, and because there was a very great disparity between the * barley of the lowlands, and the bear, or big, of the Highlands, or northern parts of Scotland. On that account, the Scotch parliament, in 1695, passed an act, by which the whole tax was imposed upon the liquor, and the malt altogether exempted. The advantages of this were experienced during the twelve years that elapsed from the passing of this act, to the union of the two kingdoms in 1707. Therefore, in negociating the treaty of union, the Scotch commissioners objected, *in toto*, to the imposing of any duties on malt, alledging, that the best Scotch barley was much inferior to that of England, and that the malt of the south of Scotland, made from the two rowed barley, was so very much superior to that which was made from the four rowed bear, or big, of the northern counties, that the Scotch parliament had given up all idea of taxing the grain, and had, for 12 years past, laid the whole tax on the liquor.

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* The barley of the Lowlands was generally raised in the south of Scotland before this period, and Mr Meickle was sent to Holland to learn to construct a mill for making pot barley, then called French barley, only three years after the union, viz. in 1710.

The English commissioners felt all the force of this reasoning; but insisted, that as negociators for the union on the part of England, they could not legislate for the British parliament, as to any *mode* of taxation in preference to another, or as to any perpetual exemption of Scotch malt; or dictate what articles should not be subject to taxation. The Scotch commissioners could not deny the propriety of these arguments; but both parties were satisfied with the great inequality of a tax upon malt:—And the Scotch commissioners also insisted, that, from the poverty of their country, and the low price of ale in Scotland, they could not afford to pay so high duties as England.

To compromise the matter, and to prevent the treaty from breaking off, it was agreed that Scotland should be exempted from all *malt tax* during the then war with France; and that, as long as the then duties were continued in England, a tax of two shillings should be imposed on every 12 Scotch gallons of two-penny ale, or one eight part of the retail price of the liquor.

Independently of what is known by those who are conversant in the history of the union, or who were informed of many minute circumstances by the negociators of it, the words of the XIVth article of that treaty, afford internal evidence, that the above exemption, during the then existing war, was a compromise agreed upon to prevent the two nations from differing on this article. 'And seeing it *cannot be supposed* that the Par-'liament of Great Britain would lay any burden *but for the* 'good of the whole, and with due regard to *the abilities and cir-*'cumstances of every part of the united kingdom, therefore no 'further exemption *be insisted on* for any part of the united 'kingdom, but the consideration of the exemptions beyond 'what is agreed on, be left to the decision of the parliament of 'Great Britain.'

It was supposed that the malt tax in England would be taken off at the end of the war, and that the whole duty would be imposed on the liquor, as it had been in Scotland: This would have probably happened, if the same men had continued in power, who had promoted the union of the two kingdoms.

But those who negociated this treaty in 1707, had lost all their influence in England, before the conclusion of the war; and the Tory ministers in 1713, renewed the malt tax, after the peace of Utrecht was concluded. The tax which they imposed was 6d. per bushel. The malt committee at first agreed that Scotland should pay only 3d; but when the northern counties of England, and the principality of Wales petitioned for a similar exemption, it was carried by *a majority of one*, that the

tax should be general over the island; though the Scotch members made a most strenuous opposition, and were supported by the most respectable characters in England.

This unfair procedure raised the greatest ferment in Scotland, and was one of the secondary causes of the rebellion which broke out next year. The farmers and others who made their bear into malt, refused to give notice to the excise officers, and even to grant them admission into their barns: the justices of the peace refused to act, and the whole amount of this high nominal tax did not, in many cases, pay the expence of collecting it. The clergy, who, by a declaratory act of the Scotch parliament, were exempted from all taxes on their stipends, and on the produce of their glebes, and who had never been charged for any malt tax before, in order to allay the ferment, stepped forward voluntarily, and paid small sums of money for the malt used in their families; and, in some instances, they succeeded in quieting the minds of the people: In others, they were considered as betraying the interests of Scotland, for fear of endangering the Hanoverian succession, or their own ecclesiastical establishment. Now that the spirit of party has subsided, it will not admit of a doubt, that the malt tax of 1713 was unjust and oppressive with regard to Scotland; and though it was said, in the 14th article of the treaty of union, that it was not to be *supposed* that the parliament of Great Britain would lay on any burdens but with due regard to the circumstances and abilities of every part of the united kingdom; yet, in six years after the union, the British parliament did *actually impose* a heavy burden upon Scotland, *without any regard to the circumstances of the case*, viz. the inferiority of Scotch grain, or the *ability of the people, in that part of the united kingdom*, to pay a tax, which in several places was nearly equal to the value of the raw article †.

The rebellion in 1714 and 1715, while it put an end to the hopes of the Pretender, also destroyed the influence of the Tories, who were rather unfairly confounded with the Jacobites. Therefore, when the annual malt tax was imposed in 1725, all that had been promised at the negociating of the union on the part of England was honourably fulfilled; and the British parliament, without any opposition, enacted, that Scotland should pay only 3d. while England paid 6d. on the bushel of malt. By this means, though Scotland did not obtain a total exemption from the malt tax, and get the whole duty imposed upon the malt liquor, it was now charged with only a reasonable proportion of the malt duty. And it was agreed, that all the

† The price of bear in Aberdeenshire, by the fiars of the county for 1712, was 5s. per Aberdeen boll, of $6\frac{2}{3}$ bushels, or 6s. per quarter.

the produce above 20,000 l. should be laid out in improvements in Scotland.

On this footing matters continued till 1801, when, without the slightest struggle on the part of the representatives for Scotland, or making any distinction between the barley of the southern, and the bear, or big, of the northern counties, an additional tax of 12½d was imposed upon the bushel of malt, made in every part of Great Britain. Several small additions had been made to the malt tax since 1725, and some of these had been repealed; but the proportion of the rate of taxation had continued unaltered for 77 years, without any attempt to alter that proportion. So much for the history of the malt tax, as far as it regards the proportion of duty imposed on English, compared with that on Scotch malt. I now proceed,

II. To state some facts respecting the different values of English barley, compared with Scotch barley, and with Scotch bear, or big, and of this last, compared to Scotch barley.

It is not to be denied, that many of the Southern counties of Scotland, do, on their improved lands, (hilly grounds excepted) produce as good barley as part of Wales, and of the three northern counties of England, on an average of seasons: and if, on imposing the very great additional tax of last year, no more duty had been laid on the malt made in these parts of South Britain, there would have been no objection from North Britain to be included in the same rate of tax with North Wales, or the North of England; though it would be more prudent to give orders to the revenue officers, to charge moderately in these districts, than to divide England into provinces for the purpose of taxation. But when the southern counties of Scotland are compared with the average of England, the difference is nearly four degrees of latitude, and three degrees of heat, in the medium temperature of the summer months; and it cannot admit of a doubt that Scotch barley is much inferior to English.

When it is also considered, that, owing to the increasing luxury and population of Scotland, much more wheat is now raised there than what was formerly produced; and that the dung which some years ago was generally applied to the barley, is now given to the wheat in several districts; it will be found, that our barley is often less abundant in quantity, and far less valuable in point of quality, than it was before wheat made a part of the farmer's rotation in the middle, or his principal object in the southern counties of Scotland.

Independently of what may be termed general reasoning, and with the exception of some unfavourable situations in England, and very favourable ones in some parts of Scotland, the dif-

ference between English and Scotch barley appears in the following particulars:

1*st*, English barley is generally weightier per bushel than Scotch barley is, by 3 or 4 pounds.

2*dly*, A certain number of grains, 100 grains for example, (from the size and better quality of each grain, or pickle, as it is called) of English barley, are, in proportion, more weighty than the same number of grains of Scotch barley, above what the comparative weights of a bushel of each kind amount to.

3*dly*, In the process of malting, there is more hull, or surface, exposed to the water in the cistern, and less farina in the Scotch than in the English barley—more of its substance is extracted by the steep water, or exhausted by the shooting of the acrospire in the lean, and more oblong grain of Scotland, than in the rounder, and more plump grain of England, on any given quantity, suppose a bushel, in proportion to the weight of each kind.

4*thly*, Owing to the English grain, in most cases, growing under a warmer sun, on a better soil, above a better, or more open subsoil, and either in a better exposure, or better sheltered by woods or hedges than Scotland is, even in the southern counties, there is not only more meal, or more pot, or pearl barley in a bushel of English, than in a bushel of Scotch grain, but when barley is malted, and made into ale or spirits by the brewer or distiller, there is much more saccharine, or extractive matter, consequently, more beer, or ardent spirits of a given strength, in a quarter of English, than in a quarter of Scotch malt.

5*thly*, The price of Scotch barley is at a medium much inferior to the price of English barley, which is a decisive proof of the inferiority of the former.

6*thly*, Scotland being a narrower country than England, and in a more northerly climate, has more rain, less sun, or dry weather, more bad harvests, consequently produces barley of inferior quality. It is owing to this that bear, or big, in many of the higher or more elevated districts of the lowlands, and in most of the Northern counties must be sown in place of barley, which does not ripen in time in those districts, except in very early seasons.

In every view, the barley raised in England is, taking the medium quality of the whole country, on an average of seasons, much superior to the barley which is raised in Scotland, compared in the same manner.

But if English barley be much superior to that raised in Scotland, it is still more superior to the four, or six rowed species of that grain, which is called bear, or big, and which is the only one that can be raised to advantage in the northern counties, and Highland districts of Scotland. Between the geographical situation and climate of England, and that of the

the northern counties of Scotland, there are, at a medium, five degrees of latitude, and four degrees of heat in the average temperature of the summer months, which produces a very great difference in the seasons of seed-time and harvest; in the process of vegetation; in the riches of the farina, in the thickness of the hull, in the ripening of the grain, and in its intrinsic value. The northern counties of England may be equalled by the southern counties of Scotland, but are far superior in point of climate, and almost every thing else, to the Highland, and northern districts of the island: and Scotch bear, or big, cannot be compared in any respect with English barley, except that it will grow and ripen on a soil, and in a situation and season, where the other would not at all, or very rarely succeed.

The differences between English barley and Scotch bear or big, are many and great: the following are selected as the most remarkable.

1*st*, English barley is not only much weightier per bushel, but even when less weighty, yields more meal or pot barley, still more pearl barley, and far more ale and ardent spirits.

2*dly*, English barley is more equally ripened, from the grounds being more level; and the size of every grain is also more nearly equal, a matter of great consequence to a maltster; whereas from the unevenness of the ground, and the declivity of hilly grounds exposed to the north, Scotch bear ripens very unequally, and the grains are very unequal in point of size.

3*dly*, At an average, ten grains of English barley weigh fourteen of the best Scotch bear, or big, seventeen grains of middling bear, and twenty-one of weak bear, such as is often found in Scotland in late seasons. Any person who looks at two stalks, one of the English two rowed barley, and the other of the four or six rowed bear, or big, will see this difference at once.

But, to put it beyond all doubt, the writer of this paper weighed a pound of English barley, another of the best Scotch bear, a third of middling bear, and a fourth of weak Scotch bear, the produce of his own glebe (or parsonage lands), and carefully counted the number of grains in each pound avoirdupois. The English barley contained almost exactly 10,000 grains in the pound, there being only 10,016 grains in all, of which 24 were of oats, that had grown among the barley: The pound of best Scotch bear contained 14,112; of middling bear, almost exactly 17,000 (only five less); and of weak bear, 21,248 grains. This experiment, which any one may repeat, puts the difference of the grains beyond all dispute.

4*thly*, In the process of malting, a quarter of English barley swells much more than a quarter of Scotch bear, or big, does,

while in the steep or cistern; and the malt is much better, because less substance is extracted by the steep water, and less injury done by the shooting of the acrospire where the grain is stronger, and where fewer grains are contained in a given quantity.

5thly, There is from the climate, soil, subsoil, and situation, much more liquor, much better flavoured ale, far more saccharine, or extractive matter, a more kindly fermentation, and a greater attenuation of the worts, or wash, from English barley, than from Scotch bear, and consequently a far greater quantity of spirits in the former than in the latter; although in England much more spirits could be obtained than are usually obtained by the English distillers, who use too strong wash, owing to the excise laws.

6thly, The price of English barley is always much higher, yet the price of bear is often enhanced in Scotland, by its being made into meal, in great quantities; and always a proportion of bear is made into meal in Scotland.

7thly, That, notwithstanding the high price which is further increased by the expence of importation, it was, in 1800, found to yield the cheapest food, because a quarter of it, when ground, made much more meal than the like quantity of Scotch grain of any kind.

While *the superiority of English barley to Scotch bear, or big*, is so very evident, a regard to truth and to impartial investigation requires that *the superiority of Scotch barley to Scotch bear, or big*, should also be noticed.

Here it may be remarked in general, that though English barley is no doubt superior to Scotch barley, yet the latter is, at an average of seasons, as much superior to Scotch bear, or big. It is weightier per bushel—in general more equal, both in point of ripening, and size of the grain—much larger bodied—swells more in the process of malting—less exhausted in that process—contains more saccharine matter—fetches a higher price in the market—and, in every view, a different species of grain, and more valuable, than either the four or six rowed bear or big, can be, in an average of seasons. These are facts generally known and acknowledged by every impartial man acquainted with the subject. The two following circumstances are not so generally attended to, if they be known at all, by many practical farmers.

In the lowland counties of Scotland, south of the Forth, barley grows to advantage, in the flat or loose soils, (except on a high elevation, above the level of the sea); while bear, or big, runs to straw in these more fertile districts. This fact was ascertained last summer, when the writer of this paper sent a quantity of Kildrummy bear to a friend in East Lothian, where it did not

ſucceed, owing to the above mentioned cauſe, though it was the beſt bear in Aberdeenſhire. The ſoil was too rich for bear.

On the other hand, in the northern counties and Highland diſtricts of Scotland, barley does not anſwer; it requires a finer tilth,—ſoil of a looſer texture, or more pulverized—is at an average of ſeaſons *one fourth part longer* on the ground than the bear, or big, before it is ripened (being from 13 to 18 weeks, while bear is from 10 to 14 weeks, till it is cut down) and requires a better ſoil, and land in better order. Indeed the difference requiſite in moſt ſeaſons for the growth and ripening of barley, renders it impoſſible to raiſe it to advantage in the northern counties, where the ſummers are ſhort, and the harveſts precarious. On theſe accounts, bear, or big, muſt in ſuch places be preferred to barley, as the ſureſt crop, though of, by far the leaſt value.

Barley, compared to bear or big, is like autumn wheat compared to that ſown in ſpring; in a remarkably fine ſeaſon, the difference may not be great; but on an average of ſeaſons, the difference is very conſiderable: A quarter of good barley in a bad ſeaſon is ſuperior to two quarters, and indeed ſometimes ſuperior to three quarters of bad, or froſted bear. In general it may be ſaid with truth, that if Scotch barley is to Engliſh barley as 5 to 7, Scotch bear, or big, is to Engliſh barley *one to two*, and to Scotch barley nearly as two to three; and it is as reaſonable to continue the old proportion of taxes, which ſubſiſted for 77 years, on all malt made from Scotch bear or big, as it is to make a difference betwixt Engliſh and Scotch barley. Indeed it would have been more prudent, for reaſons to be afterwards mentioned, to have continued the old proportion of taxes on all malt made in Scotland, whether from Engliſh or Scotch barley, or from Scotch bear, or big.

In a reſolution of a meeting of landholders of the different counties of Scotland, it is ſaid, 'As to bear, or big, the growth of 'the northern counties of Scotland, which is ſtill more inferior in 'quality than the barley, there are not ſufficient data as yet ob-'tained to aſcertain its proportion in the ſcale.' Is there not a botanical difference, and that a wide one, between the *two rowed* and the *four or ſix rowed* plant? Is not the ſize of each individual grain, (which contains only 10,000 grains in an avoirdupois pound, as in Engliſh, or from 11 to 12,000 grains, as in Scotch barley), widely different from the ſize of bear, or big, which at beſt contains 14,000 grains, at a medium 17,000, and ſometimes above 21,000 in the pound avoirdupois! Are not the greater weight of the buſhel of Scotch barley, the more equal ripening of the champaign fields of the Lowlands, the comparatively leſs injury done to this barley in the proceſs of malting, the greater quantity of ſaccharine, or extractive matter in its malt, and the greater aptitude to fermentation in its worts and waſh, and alſo

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the far greater proportion of ardent ſpirits when diſtilled from Scotch barley, deciſive proofs of its ſuperiority to bear, or big: and, beſides all theſe, do not the prices of each, from the competition at market, afford ſufficient data for fixing their relative proportions———In fact, there are *more* data for aſcertaining the proportional value of the bear, or big, of the northern counties, to the barley, either of England or Scotland, than for aſcertaining the difference of the Scotch from the Engliſh barley, whether, in point of value, or as being more eaſily diſtinguiſhed from the latter in all the proceſſes of malting and brewing. But the writer of this paper deprecates the method of dividing Scotland againſt itſelf, or of preferring the intereſts of one part of the kingdom to the other, and therefore, omits for the preſent, a minute analyſis of the printed reſolutions, from which this quotation was taken, though he may find it neceſſary at a future period to point out the differences of Scotch barley, as diſtinguiſhed from bear, or big.

On the whole of this branch, the proportional value of Engliſh and Scotch barley, and alſo of Scotch bear, or big, are not very different from that of white or refined ſugar, raw ſugar and molaſſes; and it will appear in the Appendix to this paper, that the writer does not uſe this compariſon merely as an alluſion, but that he has aſcertained the quantity of ardent ſpirits which he extracted from Engliſh barley, Scotch barley, and three different kinds of Scotch bear, or big, viz. very good, middling, and inferior grain. We now proceed,

In the IIId place, to offer ſome remarks on the taxing of malt in general, where that tax is very high on every ſpecies of grain malted.

As malt in Britain is made only from barley and from bear, or big, we ought here firſt to conſider, how far the raiſing of both theſe kinds of grain is favourable to an improved agriculture.

Wheat is a ſtrong tap-rooted plant; and being generally ten months on the ground, is a great ſcourger of the ſoil, which is alſo apt to get foul, unleſs it be drilled and hoed, or otherwiſe kept clean by weeding. Oats are alſo tap-rooted, though not ſo deep in the ſoil as wheat is, and remain for five or ſix months on the ground. The large leafy ſtalks prevent the circulation of air, or its free admiſſion to the roots of the different ſown graſſes. On all theſe accounts, barley, or bear, with graſs ſeeds, is neceſſary to an improved agriculture, and ſhould be uſed once in every rotation of crops. No friend to the general intereſts of the iſland will be an advocate for ſowing barley after wheat, without a green or black crop intervening, though this is often practiſed, both in the county of Norfolk, and in the three Lothians. But no diſcouragement ſhould be given to the ſowing

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of barley, either in England, or in the ſouthern diſtricts of Scotland, along with graſs ſeeds, as this is the beſt preparation for a rich crop of clover. And in the northern counties, or Highland diſtricts to diſcourage the raiſing of bear, or big, with graſs ſeeds, is to ſtrike at the root of all improvements in agriculture, in thoſe remote parts of the iſland, where ſuch improvements are yet in their infancy. No other ſpecies of grain, not even barley, will anſwer as a proper nurſe for graſs ſeeds; for in a late harveſt, bear is the only ſteady crop in places where wheat cannot be raiſed, where barley is often froſted, and oats are ſometimes deſtroyed by the inclemency of the weather. It is therefore obvious, that by impoſing a high tax on bear, or barley, which has the effect of leſſening the quantity of land laid down with that crop, or throwing either of them out of the courſe of cropping, our agriculture is deeply injured, even in good ſeaſons, while in unfruitful ſeaſons, and late harveſts, if the graſs ſeeds be ſown with oats, they are often choked by that crop lodging and rotting in the fields; and, on the other hand, the oats are either rendered unſerviceable, or are harveſted with very great difficulty, owing to the clover, or other graſſes ſhooting up, or being mixed with the ſtraw, or ſtalks of the oats. Hence in this part of the iſland, a great injury to improved agriculture would be occaſioned, by an injudicious, or exceſſively high tax on malt.

There are many other bad effects produced by too high a tax on malt, whether this be made of Engliſh or Scotch barley, or of Scotch bear, or big.

When the tax on any article, ſinks the price of the raw material of which it is made, as much, or nearly as much, as the tax amounts to, that tax is paid by the raiſer or owner of the raw material or rude produce, and not by the purchaſer; and therefore ſuch ought to be repealed or modified, except where it is the intention of the legiſlature to diſcourage the raiſing of the raw material, or the too great uſe of the article. In caſes where the raw material is one of the neceſſaries of life, or an article, the raiſing of which is eſſentially requiſite, a high tax on the raw material is one of the greateſt errors (it might ſeem harſh if we ſaid crimes) that can be committed by an ill informed ſtateſman, or ſanctioned by a well intending legiſlature. Yet it is certain, that the late very high tax on malt not only tends to check the improvements in agriculture by diſcouraging the raiſing of barley, and of bear or big, but that it has alſo the greateſt tendency to produce a ſcarcity in the firſt unfavourable ſeaſon. For let it never be forgotten, that in 1782, 1799 and 1800, the barley of the ſouth, and the bear or big of the north were the principal ſupporters of the lives of the common people of Scotland, who were not able to purchaſe flour (which often was not to be got in the interior diſtricts), and who could not have eaten the bad

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oat meal of theſe years, without a mixture of barley, or bear meal. Nay, it deſerves here to be remarked, that in 1782 and 1799, the crop of bear or big was in general good and well ſecured, or harveſted, in the northern counties; while the little barley raiſed, was much hurt or deſtroyed by the froſt; for in the north of Scotland, we have not climate to ripen barley in late ſeaſons. It was bear-meal alone, that ſaved the lives of our people in 1782, until peaſe came from England, and oats from the Continent, in the ſpring and ſummer of the following year. The diſcouraging, therefore, the raiſing of this crop cannot fail of being attended with the very worſt effects: It not only checks our improvements in agriculture, but may eventually produce a famine, or at leaſt a great ſcarcity of proviſions in the northern counties.

The happineſs of mens minds deſerves ſome attention, as well as the ſupport of their bodies. When the impoſing a tax produces provincial animoſities, or revives national jealouſies, that tax ſhould be either modified, or inſtantly repealed; for the affections of a free people are always of more value than any ſmall difference in the amount of a particular tax can be to that of the whole annual ſupplies. It would be improper here to dwell minutely on what ought to be ſtated with great delicacy: but it is not to be denied, nor can it be altogether concealed, that the late very high tax on Scotch malt, and eſpecially the alterations in the proportion of the duty on this, compared to Engliſh malt, and the ſeizing and carrying off the grain when not entered, have, in ſome caſes, produced an alienation of mind among the people, a want of confidence in their own repreſentatives, and a revival of ancient national reſentments, which the writer of this paper both laments and condemns. And he muſt obſerve, that although the Juſtices of the Peace will *not refuſe to act*, as they did in 1715, yet they will *not be very active* in carrying this unpopular law into execution; and that, whatever may be the produce of this tax in cities or large towns, it will be found in the country parts of Scotland, to have been productive of nothing but of ſuſpicions, diſguſts, and other ſentiments, which no friend to the general intereſt of the empire would chuſe to encourage.

On the whole, we would obſerve, the effects of a very high tax on malt, are, that it is injurious to improvements in agriculture, that it ſinks the price of a moſt valuable article, the raiſing of which ought not to be diſcouraged, as we depend very much upon it for our comfortable proviſion, if not the chief ſupport of the common people in calamitous ſeaſons; and laſtly, that the impoſing this high tax, and the alteration in the proportion of the duties on Scotch malt, joined to the ſeizing and carrying off all malt that is not regularly entered, tend to excite

cite ſentiments of diſguſt among the people. Enough has been ſaid as to the bad effects of a high tax on malt. We come now, in the

IVth place, to offer ſome remarks on the proportion of tax that ſhould be eſtabliſhed between Engliſh and Scotch malt, whether from barley, or from bear or big.

Here we would firſt conſider the proportion of taxes that can be properly impoſed upon rude produce, or raw materials, of different qualities.

There cannot be a greater error on the ſubject of taxation, than to ſuppoſe that a tax ſhould be exactly proportioned to the prices, or comparative values of rude produce, or raw materials. The tax ſhould always be conſiderably leſs on coarſe rude produce, or raw materials, than the proportion of the price of theſe, to that of the rude produce of raw materials of a ſuperior quality. The greater expence of ſea or land carriage, of warehouſe room, and labour, or the additional ſpace, time, and trouble employed in manufacturing or preparing it for the market, muſt always be taken into the account; and when theſe things are correctly ſtated, it will be found that the taxes on coarſe rude produce, or raw materials, ſhould be far leſs conſiderable than the mere difference of price between them and articles of a ſuperior quality.

Let us apply theſe remarks to the caſe of Engliſh and Scotch barley, and of bear or big. It is ſaid that Scotch barley is, at an average, to Engliſh barley, as five to ſix; and that Scotch bear is the ſame as four to ſix, or as two to three; therefore it is inferred, that the taxes on malt made from all theſe different qualities, or kinds of grain, ſhould be impoſed in the above proportions. It is really aſtoniſhing, that any man of good ſenſe, and eſpecially any wiſe legiſlator, ſhould reaſon in this manner: For although we ſhould grant the premiſes, the concluſion by no means follows. Is the carriage of the inferior grain by ſea and land, the malt-barn, the grain-lofts or cellars, the expence of the porter or day-labourer, of the maltſter, of the brewer, and his additional ſervants, who are employed in maſhing and brewing the inferior grain; in ſhort, is every ſort of expence, accommodation, time, and labour, before the wort is put into the copper, or into the cooler, to be conſidered as of no value? Suppoſe, for example, that a maltſter's annual expence, including tear and wear of machinery, intereſt of capital, rent of houſes, and the money price of labour of all kinds, to be 6000l. a year; and that he malts only Scotch barley, and pays *five-ſixths* of the Engliſh malt-tax; or that he malts only Scotch bear, and pays but *two-thirds* of the Engliſh duty. Is it not obvious, that by not employing his capital, his machinery, and his different houſes and ſervants upon the moſt valuable ſpecies

of

of grain, he loſes 1000l. a-year, if he malts only Scotch barley, or 2000l. a-year, if he malts only Scotch bear or big; becauſe he loſes all the difference of labour, intereſt of capital, rent or repairs of houſes, and tear and wear of machinery; or would have made ſo much more profit, if he had malted only Engliſh barley: It does not require much mathematical knowledge, far leſs great financial abilities, to ſee, that in the above ſuppoſition, the malt-tax on Scotch barley ſhould not be the *simple fraction* of five-ſixths, but the *compound fraction*, five-ſixths of five-ſixths; and that the tax on Scotch bear or big ſhould not be two-thirds, but two-thirds of two-thirds, or four-ninths of the tax that can be fairly paid on Engliſh barley. If the barley of the South of Scotland, as to its ſaccharine ſtrength and power of producing ale or ſpirits, be equal only to five-ſixths of the real value of Engliſh barley, it ought not to be taxed above two-thirds of the duty on Engliſh malt; and if the bear or big of the north of Scotland contain only two-thirds of the extractive matter which the ſame quantity of Engliſh barley contains, it ought not to be taxed above four-ninths of what is paid for malt of ſo much ſuperior quality. The fact here is, that the bear of Aberdeenſhire, at a medium of 30 years, is not quite two-thirds of the price, and does not contain ſo much as three-fifths of the ſaccharine, or extractive matter, contained in Norfolk barley, and ought not to pay above half the Engliſh duty.

Under this branch, viz. the proportion of taxes that ſhould be impoſed reſpectively on Scotch and Engliſh barley, and alſo on Scotch bear or big, we would next enquire into the danger of innovating or altering long eſtabliſhed rules in regard to the different proportions of malt-duty to be paid in England, and in Scotland.

Soon after the Union, as already mentioned, a violent ferment was occaſioned in Scotland, by impoſing the ſame malt-tax on both countries; and all the revenue obtained from this high nominal duty, which was chiefly obnoxious to the Scots, on account of its proportion to the Engliſh duty, did not, in Scotland, defray the expence of collecting it. To regain the affections of the Scots, and make a due allowance for the ſituation and circumſtances of that people, as well as to obtain ſome revenue from Scotch malt, which could only be made effective by a moderate tax, a proportion of duty, viz. one half of what was paid for Engliſh barley was fixed upon as the rate of taxation on malt made in Scotland, with the conſent of all parties; and continued unaltered for 77 years. During that period, very great quantities of Engliſh barley and malt-liquor were imported into Scotland, while very little was exported from the latter country into England, and that little, chiefly in ſeaſons when the harveſt (which happens very rarely) was favourable in Scotland,

land, but unfavourable in England. The arguments for eſtabliſhing nearly 80 years ago the proportion of malt-duties in the two countries, ſtill remain in force for continuing that proportion. Phyſical diſadvantages cannot be removed by political regulations, and the laws of climate are not to be altered by human legiſlators. Scotland ſtill lies between the 55th and 60th degree of latitude, while England is five degrees nearer the equator. Let the old proportion of the malt-tax be continued, while the climate is ſtill ſo northerly, and while the grain is ſo much inferior in point of quality, ripening unequally near the mountains or on the declivities of the hills, growing on a poor or comparatively cold ſoil, while England in general enjoys a happier climate, and its grain is much ſuperior, from its being raiſed in a level country, under a warmer ſun, on a richer ſoil, incumbent on chalk or marle, that may eaſily be converted into manure.

Independently of the argument, which arises from 77 years prescription, of the proportion of malt-duty, an important and happy change in the situation of Great Britain, renders it more expedient than ever, to adhere to the proportion of malt-tax that was established in 1725, from a liberal construction of the Articles of Union between England and Scotland.

We are now happily united to Ireland, and we ought to make allowances for the climate of that island, and the abilities and circumſtances of its inhabitants, by not only a faithful adherence to the Articles of Union with that kingdom, but by acting up to the spirit, as well as to the letter of that treaty, and by a liberal conduct to the Irish nation. The late Lord Kilwarden (and I cannot quote a better authority) introduced a new code of criminal laws for the Irish; and justly observed, that, from the manners, character, circumstances, and situation of that people, the laws of England would, in many cases, be improper for that country. If *moral causes* affect the *penal laws* of Ireland, surely *physical causes* are still more powerful arguments for establishing in Britain different proportions of taxes on articles of unequal value. And if this difference in the rate of taxation has been established with the consent of all parties interested, it should not have been altered after 77 years experience of its good effects; at any rate, not without very strong reasons, and very minute investigation.

It would be improper to conclude this section, concerning the proportion of taxes that should be established between Scotch and English malt, without animadverting on a proposal which has been made to tax English barley when malted in Scotland, at the highest malt-duty, and to charge both Scotch barley and Scotch bear at five-sevenths of this duty.

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This proposal was made at a meeting of freeholders from different counties in Scotland, at Edinburgh, in April last, and makes part of the printed resolutions.

We have the best authority for saying, that, 'A kingdom divided against itself, cannot stand.' The Lowland farmer, or rather proprietor, according to the spirit of the above mentioned resolutions, wishes to tax English barley, if malted in Scotland, to the utmost extent, as if it had been malted in England. By this means he hopes to drive English barley, the price of which has already been increased by the expence of importation, commission, &c. entirely out of the Scotch market, where, from its superior quality, it has a constant or very general demand, and has always fetched a higher price than Scotch barley. In case, however, he himself should find that there is a scarcity of bear in the northern counties, he wishes to send his barley to them, and to obtain their whole supply, by the difference of the malt-tax between English and Scotch barley. While these are the objects of the interested Lowlander, the great distillers (who, by getting a principal part of the spirit-duty imposed upon the contents of their stills, have now, in a great measure, obtained the monopoly of Scotch spirits) hope to be able to purchase the bear or big of the northern counties at a low rate, for mixing, as raw grain, among the malted barley of the lowlands; because the bear of the northern counties is too lean a grain to afford to pay the high malt-duties, to which it would be liable if malted. By this means both the farmer and the distiller in the Lowlands would derive great advantages. On the one hand, English barley would be kept out of the Scotch market, by the expence attending importation, and by paying two-fifths more of malt-duty than Scotch barley, or 7d. where the other paid only 5d. On the other hand, the bear or big of the northern or highland districts, would be unable to pay five-sevenths of the English duty; therefore, the Lowland barley only would be used as malt, both by the brewers, and by the great distillers of Scotland, while the bear or big of the north was only used, as raw grain, to be mixed with the malt of barley, by the distiller, and bought at a very inferior price. Such is the union of interests in the Lowlands: But why is a vile, selfish spirit to be cherished in the breast of a Scotsman? What can we do for our country, if selfish passions, and local interests are thus to influence, not merely our secret actions, but also to appear in our public resolutions? When we come before the Legislature, in so questionable a shape, will they regard our complaints? Let all Scotland unite in one object, viz. to get the proportion of taxes continued on the footing

on

on which they stood for 77 years. We shall then stand or fall together. But if we divide into parties, if we be influenced by local interests, if we refuse (as this meeting did) to allow any of our countrymen to state facts expressed in decent * language, because it is not for our interest that the whole truth should be known, we shall then become a parcel of despicable counties, frittered down, and rendered contemptible, by our own selfishness; instead of being considered as a whole kingdom, commanding respect from the two nations, to whom we are happily united in one empire, and general legislature.

If English barley, however, is to be taxed, when imported into Scotland, Scotch barley should be subject to one rate of taxation, and bear or big to another. This, however, was not proposed in the general meetings held at Edinburgh last spring. The system of partition in Great Britain, as in the hopeful partitions on the continent, should have been accompanied by a scheme of indemnities. Viewing the matter coolly and impartially, it is the interest of Great Britain, and especially of Norfolk, and the other counties, that raise and export much barley, that the superabundant barley of England should find a market in Scotland, which does not supply itself in an average of years; and as the expence of carriage, commission, &c. is considerable, that it should pay no higher malt-tax than what is paid by Scotch grain. It is also for the general good, that the superabundant barley, whether of England, or of the southern counties of Scotland, should have free admission, on an equal tax, into the northern and Highland districts, provided the old proportion of taxes on English and Scotch malt is continued.

The writer of this paper would now, on this important subject, viz. the proportion of taxes on malt from English and Scotch barley, and from Scotch bear or big, humbly suggest a few hints to the members of the legislature, and earnestly offer a few advices to the people.

Will the legislators of this united kingdom be pleased to attend to what is submitted, with great deference, by one who wishes well to his country, and venerates its constitution?

Our happy island, in the course of last century, encreased greatly in opulence, from our industry, our insular situation, and our free constitution. But luxury is the attendant of national

* Francis Farquharson of Haughton, as one of the Commissioners named by the County of Aberdeen, attended the meeting of landholders at Edinburgh; and was chosen one of the Committee named by

tional wealth; the comfortable subsistence of the people is the best species of luxury; and wheaten flour has been very generally substituted in the room of meal, which was made from oats or barley. About 60 years ago, the inhabitants of the midland counties of England, and a great proportion of the people of Scotland, subsisted partly, if not chiefly, on meal made from barley, and from bear or big. In the calamitous season of 1782, the lives of the common people of Scotland were in a great measure preserved, by using this species of meal. And in 1796 and 1797, and more generally in 1800 and 1801, the people of the midland counties of England, and a great proportion of the whole inhabitants of Scotland, returned to the use of barley and bear meal. From 1697 to 1801, Great Britain exported above eighteen millions (exactly 18,298,941) quarters of barley more than we imported. But, from the unfruitful seasons in the end of last century, we imported, in nine years, from 1792 to 1801, nearly eight hundred thousand (exactly 763,868) quarters of barley more than we exported. Yet, in the first year of plenty after the two last calamitous seasons, a tax was imposed upon malt, which, no doubt, tended to discourage the raising of barley; and, at the same time, the proportions of taxation between Scotch and English malt, which had subsisted for 77 years, were altered suddenly, and without proper investigation. Not long after, viz. next Session of Parliament, when there was a general dissatisfaction with this tax, and in one part of the island applications from all the people to restore the former ratio of taxation, another great addition was made to the tax, without the former proportions of malt-duty being re-established in North Britain. But it was declared that the inferiority of Scotch grain, and the consequent inability of the people, to pay the newly established proportions of malt-duty should be fully investigated; and ample redress was promised, if this new ratio of taxation was found to be unjust. In that declaration and promise, there is the fullest confidence. It is now submitted to your good sense, whether taxing malt at so high a proportion of its price, be prudent, even in the happier climate and situation of England; when you consider that it is only

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by them; and being the only member from that part of the country of which the produce is bear or big, he proposed to state the question of its inferiority to barley, in a secondary memorial, which he accordingly drew up. The Gentlemen of the south, agreed to receive this memorial at first, but they afterwards retracted that concession, and published their own memorial and resolutions, without regarding the interests of the northern counties, and upland districts.

only a few years since we imported very large quantities of barley,—that the barley and bear crops are of so great consequence to an improved agriculture, as well as our chief reliance in a calamitous season,—and that we were very lately obliged to offer high bounties, and to hold out high indemnifying security, to encourage importation. As the Scotch barley, and still more the Scotch bear or big, is so much inferior to the barley of England, even in a good season, as there is still a greater disproportion between these in unfruitful seasons and late harvests, when, from the inequality of its size, and ripening of the grain, Scotch barley malts unequally, and often a third part of the Scotch bear is carried away with the chaff, or skimmed off in the malt-steep or cistern; and farther, as an established proportion between the taxes on English and Scotch malt had continued so long, it is also submitted to you, whether the new proportions of taxation, which were introduced without a previous enquiry, should not be laid aside, and the old proportion, which has not only prescription, but reason, truth, and laws of climate, to support it, should not be restored. Let not the patrons of the agriculture of Norfolk, or any other English county, from provincial attachments, or local interests, (or rather from a false view of these interests, or ill founded prejudices), wish to check, far less to injure the agriculture of Scotland. It is not England and Norfolk, it is Great Britain and Ireland, that are now united by the closest of ties,—a national Union of Legislature and of Government. Jocky of Norfolk, be not too bold! Let no rash man attempt to oppose the general good of the empire. Let the old established proportions of taxation be restored; let the ties of affection only be increased by the Imperial Parliament of this united kingdom. Whatever may have happened above 90 years ago, when national jealousies had not subsided, and when party disputes run very high, it cannot be supposed that the Imperial Parliament will now, after mature enquiry, lay any burdens on the people, but for the good of the whole, and with due regard to the circumstances and abilities of every part of the united kingdom.

In the mean time, let me admonish you, my countrymen, to lay aside your unjust suspicions, your local attachments, and little animosities. Let me also request you to assert nothing but what is true, to ask nothing but what is right; to have confidence in your representatives, to submit dutifully to the laws, and to pay cheerfully those taxes which are necessary for supporting our free and happy constitution. Where you consider yourselves injured, represent with due respect the hardships under which you lie, from a very high tax, or from a late alteration in the proportion of your taxes, compa-

red with the sister kingdom; but do not propose that the produce of England should be kept out of your country, by a high malt-tax, under pretence of protecting your own agriculture. Remember, that the barley of England has often supplied you not only with drink, but with food, when made into meal, in calamitous seasons; and while you wish well to an improved agriculture, let it be to the agriculture of the united kingdom. If you behave with becoming respect; if ye speak truth, and act with liberality, there is no doubt that your legislators will grant you redress. But prepare, in a less oppressive way, to show your loyalty to your Sovereign, and to maintain the independency of the empire, by paying cheerfully those taxes which are necessary for the support of Government. Remember, it is one thing to pay a high tax, imposed by your representatives, as the price, the evidence, and the support of your liberty,—and another, to pay successive and arbitrary contributions, imposed by a rapacious enemy, as the evidence, the support, and the tribute of slavery. This is the conscientious opinion of

GEO. SKENE KEITH.

Manse of Keith Hall, Dec. 7. 1803.

APPENDIX.

Account of a series of Experiments made in Distillation, in June 1803, in order to ascertain the comparative Values of English and Scotch Barley, and of Bear, or Big.

IT is necessary to apprize the reader, that, in spring 1799, at the desire of the Scotch Distillery Committee of the House of Commons, the writer of this Paper conducted a series of experiments in distillation, from malt, raw grain, potatoes, and carrots. Owing to the uncommon inclemency of that season, he found it very difficult to effect a complete fermentation, even where the malt was pretty good, and impossible completely to attenuate the wash of malt that was made from weak bear. He discovered, at that time, that the using a proportion of roots, mixed with the wash, was very favourable for promoting the fermentation and attenuation. In a second set of experiments, made in 1802, under the authority of the Commissioners of Excise, he distilled a great variety of roots, and marked their different powers in promoting the attenuation of wash; and also their comparative quantities of extractive matter, and the qualities of their essential or flavouring oils. In conducting these experiments, he discovered a mode of effecting a complete fermentation, or attenuating the wash

wash to O, as marked by the saccharometer, by mixing a certain proportion of a very common root, prepared in a particular way, among the wash, or fermented worts, in a particular stage of the fermentation.

This year, 1803, he repeated his experiments upon several kinds of roots; and having transmitted the substance of the above paper, concerning the malt-tax, to a Member of Parliament, in order to verify his reasoning on the comparative values of English and Scotch barley, and also of Scotch bear or big, he entered upon another series of experiments in distillation.

With this view, he first malted 12 bushels of the weakest bear, weighing only 36 pounds per bushel, or $12\frac{1}{2}$ stones per Linlithgow boll. This bear was produced on his own glebe, (parsonage lands), on a field which was in very high order, and (on that account) had suffered much from the stormy weather in the middle of May, and from the very severe frost on the 13th of September, 1802, which checked its growth, and rendered the grain of a lighter quality, and much smaller size than it would otherwise have been; but did not in the least degree injure the germ, or hurt its powers of vegetation; for it made good seed, and malted perfectly well, though the malt was weak. He selected this kind as a proper specimen of what Scotch bear or big is in late seasons, and had it malted under his own eye. He next malted a quarter, or eight bushels of bear, also the produce of his glebe, which was of a middling quality, weighing nearly $14\frac{1}{2}$ stones per boll. He selected this quality of grain, because it was of the precise weight of middling bear (42 pounds per bushel), by the corn act of 1791.

Afterwards, in order to get the best bear that Aberdeenshire produced last season, he applied to Messrs Black and Company, brewers in Gilcomston, by Aberdeen, and he obtained six bushels of uncommonly fine malt, made by their maltster, Thomas Pickman, an Englishman, from bear which weighed 46 pounds per bushel. The malt had come out, in the process of malting, only 4 per cent. and the bushel of dried malt weighed 40 pounds, 8 ounces.

From the same gentleman he also obtained six bushels of malt, from Scotch barley, which had come out 14 per cent. in the process of malting, rather too much for the purpose of distillation. The six bushels weighed 225 pounds of dried malt, or $37\frac{1}{2}$ pounds per bushel; and the barley weighed 48 pounds, when unmalted, or 2 pounds more than the best bear weighed, per bushel.

Lastly, He procured from Messrs Black and Company, first,

six bushels, and then three bushels, of very good malt, made from English barley, that weighed 51 pounds per bushel. The first six bushels were ground on a steel mill in the country, and weighed, before being ground, 257½ pounds averdupois, or 42 pounds, 14¼ ounces per bushel. The next three bushels, or 128½ pounds of ground malt, were made from the same barley, and at the same time; but Messrs Black and Company were so obliging as to grind them on their own mill, which was a great advantage. A quantity of the wash extracted from the first six bushels, overflowed the fermenting tun, when the writer of this paper was obliged to be absent a few hours; which occasioned him to repeat the experiment with other three bushels of this excellent malt, ground in the best manner. This malt had come out 9 per cent. in the process of malting.

He shall now state the results of these experiments, both as to the quantity of spirits contained in the boll of grain (in the two first cases), and in that contained in the boll of barley or bear, in the four last experiments. For, without stating in these cases, both the quantity produced from the boll of malt, and what must also have been produced from the boll of grain, the comparative values of all these different kinds, can not be accurately ascertained.

1st, The 12 bushels of weak bear, that weighed 36 pounds per bushel, produced exactly 12½ English wine gallons of proof spirits. This is 6¼ gallons of proof spirits, or 5$\frac{7}{10}$ gallons of spirits, 1 to 10 above hydrometer proof, from the boll of 6 bushels.

2dly, The middling bear produced 11¼ gallons of proof spirits, from the quarter, or 8$\frac{1}{10}$ gallons, from the boll, 1 to 10 above proof.

3dly, The malt from the best bear produced 12$\frac{4}{10}$ gallons, from the six bushels of malt. This is 12¾ gallons of proof spirits, from the boll of bear, or 11⅔ gallons, 1 to 10 over proof. It is here a very curious fact, that a bushel of bear or big, weighing 46 pounds, should produce almost exactly double the quantity of spirits, that weighed only 36 pounds.

4thly, The six bushels of malt from Scotch barley, produced 13½ gallons of proof spirits; and, after allowing for what it had come out in the process of malting, the produce from the six bushels of Scotch barley, is 15$\frac{4}{10}$ gallons of proof spirits, or exactly 14 gallons of spirits, 1 to 10 over proof. The superiority of malt made from Scotch barley, is here very evident; for 225 pounds of this malt, though it had come out a little too much in the process of malting, yielded above a gallon of more spirits than had been obtained from 243 pounds of malt made from the best bear. But the progressive increase

crease of the quantity of spirits was still more conspicuous in the English barley.

5thly, The first quantity, viz. six bushels of malt from this barley, yielded 14⅓ gallons of spirits, 1 to 10 above proof, or 15¼ gallons of proof spirits; and, as the malt had come out 9 per cent. in the process of malting, the six bushels of barley would also have produced very nearly 15¾ gallons of spirits, 1 to 10 above proof. But, as above mentioned, a few gallons of the wash were lost in overflowing, through the inattention of a servant, and the malt was ground only on a steel mill: Therefore the experiment was repeated.

6thly, The second quantity of English malt, viz. three bushels, was brewed with the utmost care, and was much diluted, and particularly attended to in the whole process, in order to ascertain how much spirits could be produced from half a boll of good English barley, properly malted, brewed, diluted, fermented, and distilled. The produce was 8½ gallons, or 19 Scotch pints, 1 to 10 above proof. As this quantity was more than this writer had ever seen, or even heard of, as being obtained in Britain from this weight or measure of malt, (he has heard of as much on the continent, when great dilution was used), he measured the spirits in the presence of three witnesses, first by the English gallon, and next by the Scotch pint.

It is only necessary here to state, as one cause of the great quantity of spirits produced, that he mixed, in a particular stage, one bushel of a very common root, prepared in a particular manner, with the wash of every 12 bushels of malt, (except in the last case, where he had only one-sixth of a bushel of that root remaining, to mix with the wash extracted from three bushels), and that, in every case, his wash was attenuated to O, or completely fermented, and rendered as light as water, before it was put into the still. And he has no doubt that, if the wash were much diluted, and attenuated properly, by a small mixture of the above root, or of any other root whose fermentative life is shorter than that of the wash into which it is put, a much greater quantity of spirits would be generally obtained; perhaps ¼ more than is usually obtained from the quarter of grain, by most of the distillers in Britain.

The following is a short comparative view of the quantity of spirits 1 to 10 above hydrometer proof, obtained from the specified quantities of bear, in the two first cases; and in the four last, of the quantity of spirits actually obtained from the malt, and what would have been obtained from the boll of the grain, allowing for the increase of measure in the process of malting:

1. Bear of 36 lb. per bushel; the malt of 6 bushels, yielded 5.7 gallons.
2. Bear of 42 lb. per bushel, or middling bear, ditto yielded 8.1 gallons.
3. Best bear of 46 lb. malt, yielded 11⅓ gallons; bear, at this rate, 11.66 gallons.
4. Scotch barley of 48 lb. malt, yielded 12.3 gallons; barley, at this rate, 14. gallons.
5. English barley of 51 lb. malt, yielded 14½ gallons; barley, at this rate, 15.75 gallons.
6. Ditto, three bushels of malt yielded 8¼ gallons; a boll of barley would yield 18.66 gallons.

N. B. Experiment, No. 5, lost a quantity of the wash, by overflowing, and the malt was ground only on a steel mill, and not so much diluted as the 6th or last experiment.

From the above experiments it appears that weak Scotch bear is to good English barley very nearly as 1 to 3, or at the utmost as 2 to 5, from the medium of the two last experiments; that middling bear or big is to English barley as 1 to 2, or at the utmost as 3 to 5; that the best bear or big is to the same as 2 to 3 very nearly; and that Scotch barley is to English barley weighing 3 pounds more per bushel, as 3 to 4.

If no other attenuator than yeast had been applied, the superiority of English barley over all the other species of grain would have been still greater. But, as the writer of this paper had discovered a mode of completely attenuating the wash extracted from even the weakest grain, he thought it but fair and candid to treat them all in the same manner by mixing a proportion of roots as above mentioned, at the rate of one bushel of root, to every 12 of grain, although it is obvious that this gave a small advantage to the grain which was inferior in point of quality.

On the whole, it is doing no more than justice, to restore the former proportions of taxation that subsisted so long between English and Scotch malt. Indeed, it is well known that the bear or big of the northern counties, could not afford to pay half the tax imposed upon English malt in many late seasons, and that when any officer of the Excise, particularly, when a superior officer or supervisor, who was a native of the south of Scotland, came to a district or division in this county, he always charged the malt tax very reasonably in the country districts, on account of the great inferiority of the grain. The writer

writer of this paper can appeal to all the collectors, supervisors, or surveyors, belonging to the south of Scotland, to bear witness to the truth of this assertion; and he wishes that Scotland should pay a fair and reasonable proportion of the public taxes, but no more than this proportion.

P. S. Since this Paper went to the Press, the Writer of it has been informed that a Series of Experiments are just now carrying on at Edinburgh, in order to ascertain the comparative values of English and Scotch barley, and of bear or big. From the character of the able chemists, to whom the conducting of these experiments has been committed by the Highland Society, a fair and full comparison is to be expected, of what different kinds of grain are submitted to trial. But the Writer of this Paper must observe, that, from the uncommonly dry season, and early harvest in 1803, all Scotch grain, whether barley or bear, will be at least 15 per cent. better than its average value; and that all the inferior grain of 1802 has been made into meal, or given to black cattle or horses, being really cheaper than oats; and only the best bear of 1802 now remains unmalted, or unground. So that the trial will be unfavourable to Scotch barley, and still more to bear or big. G. S. K.

FOR THE FARMER'S MAGAZINE.

On the Husbandry of Ayrshire.

THE County of Ayr is of great extent, reaching from within a mile of Cairn at Lochryan to Kelly-bridge, within twelve miles of Greenock; a ſpace of about 64 miles in length, and which is in many places conſiderably above 20 miles in breadth, forming a beautiful ſemicircle along the ſhores of the Firth of Clyde. It is divided into three diſtricts, Carrick on the ſouth, Kyle in the middle, and Cunningham on the north; and is upon the whole a rich fertile country; there are few more ſo, perhaps, in Scotland of the ſame extent.—The whole of this extenſive land may be ſaid to be a tillage country, with the exception of a very few pariſhes in Kyle; rather more than the half of Carrick, and ſome of the ſkirts of Cunningham, along the weſtern verge of the county of Renfrew. In theſe three diſtricts the ſoil varies conſiderably in its quality, nature points them out as requiring a different management.

The diſtrict of Cunningham, which is ſeparated from Kyle by the river Irvine, and is generally conſidered as the richeſt of the three, is almoſt one widely extended plain of good land, where, though

though there is no doubt a considerable mixture of clay, yet what is called loam more generally prevails; at least more so than in Kyle, which is almost universally a stiff clay; and in both, the soil lies upon a bed of till, of many fathoms depth, totally impenetrable by water. In Carrick, (which is separated from Kyle by the river Doon,) the soil in general is more of a light and free nature, what is usually called a hazel mould, lying upon a rock or gravel bottom. The two first seem more adapted for frequent aration, producing weightier crops of grain; the latter for cattle pasture.

Throughout this whole county, much, no doubt, has already been done in the way of improvement, but much yet remains to be done, to bring it to that state of perfection of which it is evidently susceptible.

Before giving an account of the state of agriculture in this county, ending with the year 1803, I have a great inclination to give you a short sketch of the history and progress of agriculture therein. The history of improvement in every county in Scotland, the means by which it has been accomplished, the most approved practice, with regard to tillage, manure, rotation of crops, &c. with the general and particular effects of all those upon society, and upon proprietors and tenants, these are highly desirable, not only as matters of curiosity, but as subjects of useful speculation, to be treated of in your Magazine, and conducing to still greater improvement than has yet any where been attained. This view of the subject is of such magnitude and importance, that it requires a founder head and more experience than I profess, to treat it as it ought to be. But having been accustomed to observe the state of this county at least for 40 years past, and possessing some knowledge of the principal facts which led to its present state; I shall as briefly as I can, give you the history of Agriculture during that period; and then suggest a few things which, in my opinion, would tend to its future melioration.

About 40 or 43 years ago, there was little improvement in this county of any kind. The land indeed was ploughed, in order to raise food for man and beast, but that was nearly all that was done. As far as the eye could reach, there was not an inclosure to be seen, except immediately round gentlemens houses. The half starved cattle were herded through the day, and inclosed in folds or houses at night, till the crop was lifted, when they were allowed to roam at large. The old barbarous custom of out-field and in-field was universal: The produce was scanty: the rent trifling, and the capital of agriculturists next to nothing. Land which now sets from 2 to 3 pounds an acre was then thought ridiculously extravagant at 7s. and 7s. 6d. And, to add

to

to this ſtate of miſery, there was ſcarce a road in the whole county where one could ſtrike a trot in the middle of June; of courſe few or no carts or waggons could be uſed. I well remember, that in travelling on horſeback, in the beginning of the year 1761, with a certain Rev. Gentleman, we came to a bit of ground that was a little more hollow than the ſurrounding ſurface, and where a little water muſt run after a ſhower, but which was then as hard as the heat of the ſun can render ſtiff clay; he ſuddenly alighted, and when I enquired, with ſurpriſe, what was the matter, he replied, "This was a bad ſtep in winter." This ſo naturally ſuggeſted the well known ſtory of Kirkwood and his man, that I could not help being much amuſed; I mention it only to ſhow the ſtate of the roads within the county at that time. In ſhort, there was next to no capital, no incloſures, no regular or fixed plan of cultivation; the produce of land was only trifling, compared to what it is at preſent, and roads were barely paſſable. I cannot better deſcribe the ſtate of the country than in the words of the late worthy Mr Robertſon, one of the miniſters of Kilmarnock, in his ſtatiſtical account of the country part of that pariſh, and which, with a very little variation, will apply to the whole county of Ayr at that time. 'About 35 or '40 years ago, no incloſures were to be ſeen, except, perhaps one 'or two about a gentleman's ſeat, in all the wide extended and 'beautiful plain of Cunningham. Hence, at the end of harveſt, 'when the crop was carried from the fields into the barn-yard, the 'whole county had the appearance of a wild and dreary common, 'and nothing was to be ſeen, but here and there, a poor, bare, 'and homely hut, where the farmer and his family were lodged. 'The cattle too were then allowed to wander about at pleaſure 'through all the neighbouring fields, till the graſs began to riſe in 'the ſpring, and miſerably poached all the arable ground, now 'ſaturated with the water that lay on the ſurface. To ſuch a 'degree was this miſchief done, by the ranging of the cattle in 'ſearch of food, when none was to be found, that, in many pla'ces, it deſtroyed all proſpect of any crop, worth the labour of 'the huſbandman, for the enſuing year: and in ſome inſtances, for 'many years to come.'

In ſuch a ſtate as this, it is a happy thing for a county ſo capable of improvement as that of Ayr, where the means can be eaſily attained, that ſome enlightened and ſuperior geniuſes appeared, poſſeſſed of ſufficient ſkill and influence, to direct the application of them. The county of Ayr contains within itſelf coal and lime in abundance in almoſt every corner. Beſides these natural advantages, a banking company was erected at Ayr, which was ſoon ſucceeded by the celebrated Douglas and Heron Bank, now gone into oblivion. The latter, however ruinous

ruinous it ultimately proved to many individuals, was a great benefit to the county at large; for, from the eaſe and readineſs with which it furniſhed credit to almoſt all deſcriptions of people, it enabled both landlords and tenants to take advantage of their ſituations in a manner which they could not otherwiſe have done. They procured money from the bank, and laid it out upon the improvement of the county with the utmoſt eagerneſs and liberality. Every one ſeemed to be rouſed into new life; entered the liſts with the utmoſt keenneſs, and contended with each other for the prize of honour and profit. I forbear to mention the names of many who took the lead in this noble cauſe, leſt I ſhould do injuſtice to others equally deſerving. Only as Col. Fullarton, in his agricultural ſurvey of Ayrſhire, has mentioned one venerable gentleman, (who is ſtill alive,) to whom the county is ſingularly indebted for its improvements, neither he nor the other reſpectable gentlemen of the county can take umbrage that I follow ſuch good authority as that of Col. Fullarton.

Mr Fairly of Fairly, poſſeſſed a conſiderable property of his own, and was beſides Commiſſioner over the extenſive and fertile domains of the Earl of Eglinton. I quote the Colonel's account from memory, and, if I rightly remember, the method Mr Fairly adopted, was this: He took the whole of his property into his own poſſeſſion as ſoon as the tacks expired, incloſed, ſubdivided, and limed it at pleaſure; and as ſoon as he had accompliſhed theſe things, ſet new leaſes of it under reſtrictive plans of cropping and management. And having the like power of direction and controul over the eſtate of Eglinton, he preſcribed the ſame plan of cropping and management in every new leaſe. His ſyſtem was eſteemed ſo judicious, that it was readily and rapidly followed by almoſt every other proprietor in the county.

Though reſtrictive clauſes in leaſes, which fetter the hands of tenants, and prevent them from cultivating the ground to the beſt advantage, cannot be too much reprobated in an advanced and enlightened ſtage of agriculture, yet, when tenants are ignorant, and comparatively poor, it is problematical, if it is not wiſe and prudent both for proprietors and tenants, to bind them down for a time, to follow a certain plan. Ignorance, prejudice, ſelfiſhneſs, and ſtraitened circumſtances are formidable antagoniſts to encounter. However this may be, the cuſtom adopted was a 19 years leaſe, confining the tenant to three crops after liming, without ſaying what theſe crops ſhould be, and the land to remain ſix years in graſs before it was broke up again; ſo that during the whole courſe of a 19 years tack, a tenant could have no more than 7 crops of grain from his farm.—Theſe regulations would not

not have been ſufficient without another very eſſential one which took place ſoon afterwards, and that was an application to Parliament about the year 1774 or 75, for an act to commute the ſtatute labour, and to oblige the tenants to pay 1l. 5s. out of every 100l. Scots of valuation, for making and keeping the roads through the county in repair; and for erecting turnpikes. The conſequence of this was, that, in a very ſhort ſpace, moſt excellent roads were made in all directions; and it may now be ſafely aſſerted, that there is perhaps nó county in Scotland better provided with good roads than the county of Ayr. The beneficial effects of theſe arrangements were ſoon very conſpicuous. The county which Mr Robertſon juſtly termed 'a 'wild and dreary common,' aſſumed an entire new face. It ſoon was every where incloſed, and in the lower parts with ditches, which acted as drains to the ſtrong clay and level lands, hedges, and hedge-rows, and belts were planted, both for fences, ſhelter and ornament; and the vaſt proportion of land ſown down every year with rye-graſs gave a beautiful verdure to the face of the country, which in poetical language might be ſaid to cauſe it to ſing and rejoice.

Were a perſon, who had long been accuſtomed to contemplate 'this wild and dreary common,' and its wretched inhabitants, both men and beaſts, now to ſtand upon an eminence; to look around, and ſurvey the beautiful plains of Kyle and Cunningham, with a conſiderable part of Carrick, all under his eye, to ſee the hedges, belts and clumps of planting riſen to conſiderable height, the fields brought into regularity and order, and ſpirit and activity every where diſplayed upon ſomething like ſyſtematic principles, it would afford to him one of the moſt beautiful views imaginable,—it would be the renovation of youth;—nothing more delightful can be conceived, except a country where agriculture is carried on in a better ſtyle, and where ſomething of real ſyſtem univerſally prevails. We have not yet completely attained to that better style; much has been done, but we are far, very far, behind these happier climes.

The progress of agriculture in this county, during the ſpace of the ten years last past, has been accelerated in a conſiderable degree. This is perhaps owing, in a great measure, to the ſituation of the country during that time. The last war in which the nation was engaged, doubled, at least, the national debt; but the character of the nation, roſe in eſtimation among the other powers of Europe; and the conſtitution being eſtabliſhed upon ſuch a firm baſis, gave entire ſecurity to all the debt we had contracted. From this ſtate of internal ſecurity; from the aſcendency which we had acquired in the proſecution of the war, and the immenſe floating capital which had been

been created, the trade, manufactures, and general improvement in every art and science attained to an eminence hitherto unknown. To supply the demands of capital and circulation, banks, and branches of banks were multiplied. The effect of this upon agriculture, as well as other things, must at once appear evident.—This mass of national as well as private circulating capital, by depreciating the *value* of money, tended to enhance the value of produce. Hence farms were looked upon as being of more consequence than formerly; the value of landed property was doubled, and trebled; farms were eagerly sought after; farming became the mode; it was considered as a fashionable and necessary part of genteel education; in so much that a gentleman who knew nothing of farming, and could bear no part in conversation respecting it, would have been looked upon with contempt. Gentlemen did not now, as formerly, prescribe rules and regulations, and look on in silence to see them executed; they took an active part in farming themselves. They endeavoured to procure the best information, and led the way in farming after the best and most approved methods. Many worthy public characters in this respect might be named, but I forbear to do it, least others should be omitted who are equally meritorious. In general, it may be safely asserted, without giving offence to any, that I know very few landed proprietors at present who do not farm more or less, and recommend by their example, at least, the newest and most approved methods of farming. Whether it be owing to their example, or to the sensible conviction of its utility, certain it is, that the new, or turnip husbandry has begun to spread within the period above-mentioned. And it is to be hoped that the same benign influence which has encouraged it, will still continue to foster and cherish it, till every corner of our rich and beautiful country, shall be as fully improved as the respective soils and situations of individual places will admit.

I look upon this immense national and individual floating capital, within these last ten years, occasioning the great advance upon the value of farm produce; together with the business of farming becoming a genteel and fashionable study, and real farmers being regarded with more respect than formerly; I look upon all these collectively as the prime causes which have accelerated the progress of agriculture in this county within the space of ten or twelve years. Farming societies are now set up in different places. Farmers are led to vie with one another in honour and profit, in the management of their farms. Good ploughing is encouraged and recommended, by premiums to the best ploughman. The best

and

and most approved implements of good husbandry, are coming daily more into use; not only threshing machines, fanners, and ploughs, but the necessary implements for drill husbandry.

With the spirit and activity now exerted, notwithstanding the restrictive regulations above mentioned, and which yet too much prevail, this county produces a great quantity of grain; a great deal more than is requisite for the internal consumption. The grain chiefly cultivated is oats, which may be called our staple commodity, though in almost every farm there are more or less raised of other crops; such as bear, barley, wheat, pease, beans. But, except in a few farms here and there, there is nothing like a just, regular, and scientific rotation of cropping.

The picture which I have drawn of the shire of Ayr, is, to the best of my knowledge, just; and it may be viewed as encouraging and delightful in a high degree; it is at least so, compared with what it was within the memory of many persons living: Yet when I consider the quality of the soil, the great extent of arable land, its means and capacity of improvement, and its situation for readily disposing of all its disposeable produce, I consider it as being little more than in its infancy of improvement; at any rate, as far from having reached that high degree of cultivation, which it will undoubtedly, at no very distant period, attain.

If my ability equalled my inclination, I would gladly point out such things as are necessary to accomplish that desireable end. It is an easy matter to pick out faults, or point out deficiencies; any blundering blockhead, or rash empyrick, may do this; but it requires mature wisdom and great experience to apply a proper remedy. There are certain general principles necessary to promote and encourage perfect cultivation, that are now well understood, and for the most part readily assented to, which a person of limited experience may easily point out; and it is the part of both masters and tenants to endeavour to reduce them to practice, in as far as circumstances will permit. Some of these principles, as immediately applicable to proprietors, are such as follow:

1. That in every case where it can be done, a preference should be given to tenants of judgment, capital, and experience.

2. That tenants should be rendered free and independent of all restrictions and servitudes of every kind, except a few necessary regulations, during the last two or three years of their lease. Like all other men in society, they should be allowed to manage their affairs for their own advantage, according as their judgment and experience, and the nature and situa-

tion

tion of their farms may point out. Where a man's interest is deeply concerned, if he is a man of sense, you may safely trust him with the management of it: And in farming, particularly, I think it may be nearly laid down as an axiom, That if a tenant manages well for himself, he can scarcely manage ill for his master.

3. That farms should in every case become as much a mercantile commodity as any thing else. In other words, assignees and sub-tenants should be allowed; justice and equity immediately suggests the propriety of granting this, and a hundred cases might be supposed to shew the cruelty, injustice, and inhumanity of refusing it. It may be asked, What good can it do to a proprietor to refuse it? The common answer is, that he is thereby deprived of the choice of his tenant: Let him lay down just and reasonable stipulations in the tack, and bind the original tenant, if he pleases, to be forthcoming to him for the rent, and it is a matter of very little moment who is tenant. The stipulations must be performed, and the rent must be paid, whoever is tenant; and he cannot get sixpence more rent during the currency of the tack, whether he allows of assignees and sub-tenants, or not. During the rigour of the feudal system, there was a good and necessary reason for the choice of a tenant, when he was liable to be called out to fight the battles of his lord: The strongest man was then the best tenant. Thank God these days are past, and it is now of very little consequence, whether a tenant be five feet high, or six; whether he be a black man or a white; whether his name be Peter or Paul: If he is a good tenant, if he manages his farm well, and pays his rent pointedly, this is all that is necessary, and all that a landlord should in justice require: And it may be asserted, without much danger of contradiction, that proprietors do not consult their own interest most effectually by refusing it. For I believe it is generally observed, that farms are managed and brought to the best state of perfection where assignees and sub-tenants are allowed; especially if,

4. A sufficient duration of lease is granted, according to the nature and state of the farm. If a farm has been properly cultivated, brought to its highest perfection, and is in good condition when the tenant enters to it, it is ready meat for him; he has little more to do than set to work, and reap immediate profit. Whenever this happens to be the case, it is of less consequence what the duration of his lease may be, because he is sure of being as much, or nearly as much indemnified for his labour the first year of it as he can be in the last. But when a tenant enters upon a farm that is in a state of nature, or what is worse, in an exhausted and unproductive state; when great labour, great expence, and great risque of experiments must be incurred

incurred, it is evident that many years must elapse before he can reap any profit. He must toil thro' the course of ordinary tacks, and hardly be able, at the end, to ballance accounts; "He bears the burden and heat of the day, and sows," and it is a thousand to one but another reaps. There can be nothing more discouraging than this, and nothing more prejudicial to good and perfect cultivation. It must be a long time indeed before a county that is but half cultivated, or not cultivated at all, can be brought to its best state under the common term of a 19 years lease. Wherever, therefore, the titles of a gentleman's estate will permit, it is their own interest, either to give two or three 19 years, or a term of years certain, and one or more lives as they judge convenient: Then, if they choose their tenants with judgment, they will be sure of having their estates well improven; and those, on the other hand, will naturally feel that weight and consequence in society which they are entitled to, and be spurred on to the utmost vigour and exertion by the strongest of all motives, a sense of interest and security, and the certain prospect of providing for those who are dearest to them in the world. And least gentlemen should imagine that by this proposal I do not consult their interest; that I deprive them of reaping any benefit from the change of circumstances that may occur in the progress of Society; to obviate this, let them either take their rent in kind, according to a stipulated standard; or, which is still better, let the rent be progressive, according to the term of years for which the lease is granted; let the rent advance at the beginning of every 19 years, or the beginning of any other period that may be agreed upon. This is doing compete justice to all parties, and gives the best security, I can conceive, for the improvement of any country.

5. I would beg leave to mention another particular, which I think is not unequitable; that is, in every instance where circumstances will admit of it, all substantial improvements, such as farmstead, inclosures, subdivisions, drainage, should be done at the expence of the landlord; he should lay out the money, and either take an additional rent, or a certain per centage upon the sum expended. By this means these improvements have not only a chance of being better executed, but what is of high importance in the view of improvement, they do not cramp the tenant's future exertions. There are, no doubt, many wealthy and respectable farmers, who, at the outset of their leases, are able perfectly to do all these themselves, but it is certainly more for their advantage, and it is impossible that it can injure their landlords, that they should rather keep their money and lay it out on other improvements, than by baring

their hand at the beginning, retard their progress for many years to come.

Most, if not all of these observations, are applicable to every county that is in a progressive state of improvement, and in that view I mention them as what I think necessary for the farther improvement of the county of Ayr; and I protest solemnly, that I think them for the mutual advantage of both master and tenant: Their interests are certainly reciprocal, and ought never to be separated; a thriving tenant will make a thriving master, but if the tenant goes to wreck, both must suffer.

There are only two other public regulations that I would mention. The first respects milns. The servitude of thirlage is in some places abolished, in others it is modified, but in some others it remains in all its rigour, to the extent of the tenth boll to the miller, for grinding the other nine. This ought to be universally abolished, as an intolerable nuisance. Set tenants free from the thraldom of millers; let these pay a rent for the use of their milns; and then it will happen, according to the vulgar proverb, 'He that blows best, will bear 'the horn.'

It is a great loss to the county, that there is no weekly corn-market established in it; such as in Haddington, Dalkeith, and other places. It has at different times been proposed, but has hitherto failed. It would be a desirable object for promoting the improvement of the county, if it could be accomplished. The great utility and convenience of a regular established corn-market, in a corn country, is self-evident. It affords at all times a ready sale to the farmer, excites emulation in raising grain of the best quality, and tends to prevent undue combinations among corn-dealers, or others, to take advantage of the farmers ignorance or necessity. It is to be hoped that the gentlemen of the county, who are as eminent for public spirit as any in Scotland, will study to exert themselves, to accomplish this most necessary regulation.

At my outset in this paper, I intended to have gone into some further detail, particularly respecting the present modes of aration and cropping, and what alterations in these might be of advantage, for the further improvement of the county, were I not afraid I have already gone too far; but, if I find that what I have sent you, is acceptable, I may probably resume the subject on some future occasion. In the mean time, you will please accept my cordial thanks for the judgment and impartiality with which you conduct your useful publication.

AGRICOLA.

NOTE

NOTE BY THE CONDUCTOR.

So much good sense expressed in a distinct and accurate manner, appears in the above interesting communication, that we embrace the opportunity afforded us, from what is mentioned in the concluding paragraph, of earnestly soliciting a continuation of AGRICOLA's correspondence, especially upon the subjects which at this time have occupied his attention. Detailed accounts of the husbandry of other counties will likewise be highly acceptable, seeing that such cannot fail to prove useful and instructive. Every person possessed of the true *amor patriæ*, must contemplate with delight the gradual progress of improvement, and peruse with marked attention, the steps which have successfully been adopted in different districts, to introduce a system of agriculture, comparatively perfect, when viewed with that of former times.

On the Successful Application of Cast Iron Work, for the hanging and fastening of Gates.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

I AM enabled to assure you, that not a single instance of failure has come within my knowledge, in the cast iron work for gates, as below recommended, which has been purposely submitted to the most severe tests; and I have little doubt but that, in a reasonable time, the improvement will be generally adopted.

I beg leave to refer your readers to my paper on the subject of gates, in your Magazine for May 1803; and they will please to consider this communication as connected therewith.

Hatton Grange,
6th Jan. 1804.

I am, Sir, yours, &c.
THO. N. PARKER.

Messrs Deerman, Francis, and Company, Eagle Foundery, Birmingham, have undertaken to supply the public with the castings, completely finished and fitted, at 3¼d. per lb. *. Two tons of which are ordered to be cast without delay, and several

* I have no interest whatever in the sale of these articles.

hundred weights of the castings have already been brought into use, under my immediate direction.

I shall confine myself in this paper to the form of a few memorandums, with a view to furnish a distinct method of giving orders for the cast iron work, to those gentlemen who may wish to try it.

For the gate F, (Plate 14, of your Magazine), to which a head-strap and strap-thimble are adapted, of cast-iron, omitting the intermediate length of the 9 feet iron strap,

Mr Parker's patterns, Nos. 1, 3, 4, 6, 7, 8, and 9*, 17½ lb. 5s. 7½d.

Pair of sheet-iron escutcheons, 2d.

No. 9 is the jointed latch, in three pieces; 12 two-inch wood screws, 4 one and a half inch ditto, and 16 twopenny clout nails, will be wanting for the above.

For a common ready made gate, having a strong top-rail for the strap-thimble,

Nos. 1, 3, 4, 5, 6, and 7, 15 lb. 4s. 8¼d.

Twelve two inch screws, and two one and a half inch ditto.

For a common gate, not having a strong top-rail for the strap-thimble:

Nos. 1, 2, 3, 4, 5, and 6, 13 lb. 4s. 0¾d.

Complete set of specimens, being 16 in number, which form sets for every purpose, including swing gates, 41 lb. 12s. 5¼d.

The shapes of the several pieces of cast-iron work will point out the manner in which they are respectively to be attached to gates, and for ordinary purposes, without referring to my pamphlet. The pamphlet, however, is gone to the press with six quarto plates, and will be immediately published, by Messrs Lackington, Allen, and Company, London; and any person ordering the complete set of specimens, may be very apt to misapply them, unless he pursues my directions, which are too long for introducing into your work, and they are not capable of much abridgment.

The cast-iron fastenings † are found to resist the strongest horse purposely

* The castings are embossed with numbers from 1 to 16.

† The catch K, (Plate No. 14), has been rejected, in favour of a drop catch.

purpoſely rode againſt the gate; and the ſtouteſt man may throw the gate towards its falling poſt, with all his power, without injury to the caſt hangings.

The ſaving to the public, by adopting the caſt-iron, compared with the beſt wrought-iron work, as I before mentioned, is apparently more than 60, and really no leſs than 50 per cent.

The patterns have been executed with much exactneſs, in fine mahogany, to my utmoſt ſatisfaction*, and the caſtings are of courſe the ſame. It therefore remained only for their ſtrength to be proved; and this being done, my deſign is complete.

REVIEWERS REVIEWED.

Vindication of Findlater's Agricultural Survey of Peebles Shire.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

INDUCED, from the *Proſpectus* circulated with your Magazine, to expect a work, not of a mere local, but generally intereſting nature, and ſtill more by the favourable ſpecimen of the author's talents for general reaſoning, exhibited in the extracts from the works *relative to Dearth, Monopoly, Foreſtalling*, &c. which you publiſhed in No. 5, &c., I became a ſubſcriber for the Peebles Survey, and, in mere juſtice to the author, muſt ſay, that, upon peruſal, my expectations, ſo far from being deceived, were even exceeded.

Although the work, from its ſtile, is ſeemingly of mere local intereſt to the inhabitants of that particular county, yet the author, from his habit and talent of generalization, has communicated much uſefulneſs and intereſt even to its moſt local ſpecialities, by aſſigning reaſons of extenſive application, both in accounting for the actually exiſting practices, as well as to enforce his own propoſed ameliorations.

The mere repreſentation of the exiſting ſtate of agriculture in Peebles-ſhire, conſtitutes, in my opinion, by far the moſt inconſiderable

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* Should the cast-iron work, in any case, happen to be furnished from the foundery, without being accurately fitted, it might be adjusted by filing, with the same facility as wrought-iron work may be altered; and when any gate does not fall with the force desired, the means of encreasing the fall, have already been fully described, in my former communication.

ſiderable part of the merit and uſefulneſs of the work. In the body of it, in foot notes, and in notes ſubjoined to the Report, and referred to in the text, every preſenting opportunity is laid hold of, for diſcuſſing ſubjects of the utmoſt importance to agricultural induſtry at large, independent of all peculiarities of ſituation.

The author obſerves, in his introduction, that 'as man is not 'ſubjected to the laws of mechaniſm, like inanimate matter, nor 'to unreaſoning compulſion, like the unreflective brute crea-'tion, his conduct cannot be regulated or incited upon the prin-'ciples applicable to either, and recourſe muſt be had to *moral* '*excitements*, in order to ſtimulate him to induſtrious exertion.' He then ſtates, that, in conſideration of the narrowneſs of the county and uncultivatable nature of the greater part thereof, together with the lateneſs of the prevalence of improved huſbandry, it was agreed betwixt Sir John Sinclair and himſelf, that it would be ſuperfluous to dwell on the minute ſpecifications of detail which might be expected in the reports of counties more adapted to cultivation, and where improved huſbandry had been of longer ſtanding; and that more ſpace might therefore be allotted to the conſideration of thoſe *moral excitements* to agricultural induſtry, which are of univerſal application. In purſuance of this profeſſed deſign, though I doubt not but that the exiſting ſtate of Peebles-ſhire agriculture is juſtly, and, I am ſure, not flatteringly repreſented, the report of the ſtate of agriculture forms, as it were, only the text, to introduce general diſcuſſions of the ſubject as the comment. Had Mr Findlater publiſhed theſe diſcuſſions by themſelves, as eſſays upon the proper ſtimulants to agricultural induſtry, he would have done himſelf more juſtice, and might have obtained more readers and purchaſers than for a work which unhappily, from its title, is apt to be conſidered as only locally intereſting. As it is, to judge from what I myſelf have experienced, I believe few readers will regret the coupling of his general diſcuſſions with a local report, in as much as the really exiſting ſtate of facts in Peebles-ſhire very often forms a moſt apt and happy illuſtration of the general principles he has endeavoured to eſtabliſh. In confirmation of the idea of this work, which I have been inculcating, I beg leave to ſtate ſome few of the general topics diſcuſſed in it.

Mr Findlater, moſt juſtly, in my apprehenſion, has conſidered the nature of the leaſe as the primary ſource, either of good or of bad huſbandry; and has therefore entered into a moſt copious and perſpicuous diſquiſition upon this intereſting ſubject. In diſcuſſing *the proper character of the farmer*, he has eſtabliſhed, I think, a well defined and permanent diſtinction, that muſt ever ſubſiſt betwixt the character of *thoſe who have their fortunes*

to

to make, and who therefore conſider it as their main buſineſs to *acquire*; and of *thoſe who are born to the poſſeſſion of a fortune*, and trained up to the conſonant habits of *enjoyment*, rather than to thoſe of *acquiſition*. Having thus pointed out the claſs of farmers from whom the greateſt exertions of activity and enterpriſe, together with the moſt minute attention to economy in expence, are to be expected, he enters at large into the conſideration of the proper nature of the tenure of poſſeſſion, by which an intereſt in the ſoil ought to be communicated to ſuch cultivators. The leaſe is then amply conſidered under threefold points of view. 1ſt, *Of the proper extent of its duration*, to afford ſufficient moral excitement, or rational inducement to enter upon improvements of expenſive outlay, and diſtant return, which have hitherto been conſidered as confined ſolely to the province of perpetual proprietors, but which Mr Findlater thinks might be executed to much greater extent, at far leſs expence, and with more judicious attention to valuable uſe, tho' probably leſs to the purpoſes of ornament, by farmers of the firſt deſcription of character; a poſition illuſtrated by the effects of leaſes of 57 years, granted in the lordſhip of Neidpath. 2d, *The extent of property, in the right to the leaſe*, which he conſiders ought to be ever deviſeable, and completely alienable; a maxim, it ſeems, directly repugnant to the genius of Scotland, which abſurdly following the analogy of the poſſeſſion of lands granted, in feudal times, for the purpoſes of fighting, in the tenure of poſſeſſion granted for the purpoſes of agricultural induſtry, retains, to the landed proprietor, the right of *delectus perſonæ* in his tenant upon leaſe; refuſing to the tenant the right of its deviſement or alienation, and confining the right of holding it excluſively to his own perſon, unleſs in the caſe of its being extended to extraordinary length, or of ſpecial proviſions to the contrary, being made in the clauſes of the contract. This maxim, reſtricting the leaſe to an untransferable right veſted in the perſon of the original receiver, is ſhown to militate againſt the free outlay of capital, in fixing it, in improvements of the farm, to the extent of the proſpect of return afforded by the duration of the leaſe; and equally againſt the credit the tenant might otherwiſe have obtained for other capitals; cramping, in this way, both his outlay and his credit, in the ſame manner as is produced by entail, in regard to landed proprietors holding properties under its reſtriction. 3d, *The propriety of reſtricted or unreſtricted management*; in which it ſeems evidently to be made appear that the direct effect of preſcribed management, is to prevent all further improvement; that, in conceding free power of management, the intereſts of both landlord and tenant are equally conſulted, as ſuch inevitably coincide for

the greater part of the leaſe, and cannot poſſibly diverge till perhaps within the laſt three years, when alone reſtrictions are neceſſary to ſecure the intereſt of the landlord.

Various other diſcuſſions, of ſubjects equally important, are to be found in this work. As, however, it is not my deſign to preſent a review, but only to direct the public attention to it, as not at all of mere local, but of moſt extenſive and general intereſt, I cannot pretend to enter into the extent of his general reaſonings. I ſhall, at preſent, only further remark, that the author ſeems moſt ſucceſsful in combating thoſe univerſal and deep rooted prejudices which have hitherto ſo often tended to embarraſs the free courſe of agricultural induſtry. He has, for inſtance, evinced, in a maſterly manner, the futility of all agrarian laws, cramping the exertions of induſtry, in pretending to regulate the extent of poſſeſſion of land, to be held either in property, or upon leaſe. In the courſe of this diſcuſſion, he details, at length, a moſt intelligible and conſiſtent theory of the principles, which (if the matter is left to regulate itſelf, as in other bargains, by an enlightened ſenſe of ſelf-intereſt in the contracting parties) muſt invariably tend to dilate farms to the ſize of their moſt productive and profitable occupancy; and muſt, as neceſſarily, hem them in within that profitable and productive ſize; ſo as to render the apprehenſion of the monopoly of farms a mere chimera of a diſturbed imagination. His expoſure of the impoſſibility of the exiſtence of the fancied crimes of *monopoly, forestalling, and regrating of corn*, in regard to which the deep rooted prejudices, both of the high vulgar, and the low, have ſo often expoſed agricultural property to deſtruction, and thrown a damp upon its induſtry, by rendering precarious the free property and unlimited right of diſpoſal of its fruits, muſt be familiar to all the readers of your Magazine, from the extract you publiſhed, and which I have already alluded to.

Mr Findlater's reasonings upon these and such other general topics, have appeared to me to be satisfactory and convincing. As they however constitute subjects of universal and most important interest, I could have wished to have seen them meet with the most full and ample discussion: For this purpose, I have, since the time of his publication, been anxiously waiting to see the subject taken up in a masterly manner, in some of our reviews, by some critic capable of entering into, and of appretiating the force of comprehensive general reasoning; who might be qualified, upon satisfying grounds, either to confirm or refute Mr Findlater's general conclusions.—I long waited in vain: Unhappily it would seem, the supposed local nature of the work had prevented general reasoners from searching in it for

for any thing of a general and comprehensive nature. It is indeed but of very late, that agriculture has been investigated in the same points of view as trade, manufacture, and other connected subjects of political economy; or that any attempt has been made to discover the proper moral excitements of its industry, as constituted in the fixed principles of human nature.

I at length thought I had obtained my object, in observing the Survey, as an article in the contents of the Monthly Review of September last. In turning to the article, I was, however, most miserably disappointed; for, excepting merely an observation of the propriety of adopting on our side the Tweed, the maxim (as Mr Findlater has stated it) of the Scots law regarding the division of commonties, viz. *that an obligation to enclose is not* ipse facto, *implied in the attainment of division*, not one of the comprehensive general topics is in the smallest degree adverted to, which, in my opinion, Mr Findlater has so ably and satisfactorily discussed; nor is the least hint even given of his having discussed them at all. Were the merit of the work to be judged of by the meagreness of the criticism, it must appear to be indeed but a very poor performance. The critic, as a specimen of the merit of the work, satisfies himself with a few extracts of the detail of facts as to the provision of the clergy, the unpropitiousness of the climate, the barrenness of the soil, and the economical state of house accommodation and maintenance of the Scots cottagers; and having indulged a little in a sort of Cockney triumph, in crowing over the poverty of Peebles-shire in her frost biting climate, want of orchards, and eating of *traik*, he concludes by observing, that 'the want of richness of soil, and benignity of 'climate must diminish the interest which the public would 'otherwise take in this survey,' &c.

Though the criticism is in general commendatory; though the author is allowed to have manifested knowledge and investigation, and given much important and curious information, it is, nevertheless, *thus* calculated (whether insidiously or inadvertently) to consign the work decently to oblivion, by attaching to it a littleness of interest, proportionate to the smallness of magnitude, and other natural disadvantages, which lessen the importance of the county described.

I might, by the way, observe, as to the county described in this survey, that the disadvantages of soil and climate, so far from diminishing, ought in reason to encrease our interest in the relation of its practices, in as much as the successful combating of disadvantages by superior industry and contrivance, shews that much more might be effected through their means, under

under circumstances more favourable: Nor are practices the less or more instructive, whether carried on upon a larger or lesser scale.

But, as I have already observed, the statement of the existing facts constitute a very small part indeed of the merit and usefulness of this survey. It is, in the luminous and comprehensive elucidation given of the general principles of moral excitement to agricultural industry, that its chief merit consists; and I should be extremely sorry to find, that the public attention was diverted from the examination and discussion of the interesting topics therein contained, from its importance being thus insidiously or inadvertently confounded with the littleness of the subject, to which, from its title, it might be supposed to be confined.

Perhaps the reviewer's silence may be accounted for, from his not finding himself at home in regard to subjects of general reasoning, or from being versant in them, solely in regard to other subjects of political economy, to which they are more in custom of being applied, such as, commerce, manufactures, commodities, and their circulating medium, &c. or, perhaps, under certain circumstances, the application of such general reasonings to agriculture, may become a subject of peculiar delicacy to an English critic.

He has observed, upon the statement of the severity of the Peebles-shire climate, *By this view of the climate, the English farmer will not be tempted to migrate to the North.* Though an Englishman myself, I must confess I am afraid, that even few of your Scots Peebles-shire lairds would call for an emigration of our English tenants to occupy their farms, as in too many instances their faculties of self-exertion would be found benumbed so as to unfit them for any successful struggle against disadvantages of soil and climate, from their being habituated to act as mere mechanical drudges, turning round without reflection, (like blind horses in a bark mill) in the same beaten circle of prescribed modes of management, invented in the days of ignorance, and perpetuated through absurd, and blind, but obstinate prejudice; prevented, too, even had they any liberty of action, from opportunity of acquiring a habit of liberal outlay, in prospect of distant return, from their accustomed, unpermanent, and precarious tenures of the soil. The liberal spirit displayed by Mr Findlater, in his various discussions of the lease and similar topics, render his work, in my opinion, peculiarly proper to be well known in England; and for this reason particularly, I have stepped forward to vindicate it from that oblivion to which it is possible to suppose, that an English critic, under

under conceivable circumſtances, might have induſtriouſly wiſhed to conſign it.

In Mr Findlater's diſcuſſions, a difficulty muſt have ſometimes occurred, of finding language, already from uſe ſteadily appropriated to the ſubject—a difficulty that occurs not in ſimilar diſcuſſions upon commerce, manufacture, and ſuch like topics of political economy, as have been more frequently made the ſubjects of general ſpeculation. If the reviewer was not in capacity to be properly aware of this difficulty, it is poſſible that *the application of words to a new ſenſe*, to which Mr Findlater might have been neceſſitated, may have been miſtaken ſometimes for thoſe *Scotticisms*, with which he alledges (tho' without ſpecification,) the work abounds, and for which candid allowance is made, in conſideration of the author's ſituation. I have indeed frequently felt a ruggedneſs in the ſtyle, though I believe not unfrequently produced by the neceſſary *unaccuſtomed juncture of words*, to which I have alluded: what I have perceived, in general, has been manly, vigorous Scots ſenſe; perſpicuouſly, and, if not always elegantly, yet often moſt forcibly expreſſed.

The reviewer ſeems to think that the circumſtances alluded to by the author, as unintereſting to the public, which prevented the Survey originally drawn up for the Board of Agriculture, from being publiſhed under its ſanction, ought to have been explained. I do think there was no ſuch neceſſity. The work is given to the public, and by its own merit, and not by the ſanction, or want of ſanction of authority, ought it to ſtand or fall. If there is found in it any thing improper, the Board is juſtified in refuſing its ſanction; if there is in it any thing dubious, or even any thing merely new, the refuſal of ſuch ſanction might alſo have been expedient. A Board of reſpectability is placed in a peculiar predicament; the influence of its authority alone, independent of any other reaſon, may give currency to falſe or dubious opinions, or to bad or equivocal practical operations. For theſe reaſons a Board ought ever to be extremely delicate in interpoſing the authority of its ſanction. On this account, without pretending to any information upon the ſubject, I can readily conceive that the Board, in regard to this Survey (which is by no means of a eunuch neutral deſcription), might, in their preliminary treaty with the author, be particularly cautious in requiring that it muſt be implicitly ſubmitted to the abſolute diſcretion of their confidential literary cenſor; and, from the author's bold manner of expreſſing himſelf, I can as readily ſuppoſe him poſſeſſed of that manly independence, or (if you will) of that haughty ſelf-ſufficiency, which would prevent him from ſubmitting to ſtand forward as the author

thor of a work which ſhould not be excluſively his own, or to become chucking capon to the chickens hatched by another bird *.

The critic notices that the engravings mentioned in the title, turn out to be but one, and that miſerably executed. He is in the right; there is but one, an octavo engraving of a water meadow, containing two or three diſtinct figures, marked plates 1ſt, 2d, 3d, and referred to as ſuch in the deſcription. Three plates would appear to have been intended, but economy had been conſulted, and the book is proportionally cheap.

If you conſider my purpoſe as laudable, in thus endeavouring to reſcue this work from that unmerited oblivion, into which it is ready to be plunged with ſuch as may be diſpoſed to take their character of it from the Monthly Review, you will publiſh this, and oblige your conſtant reader,

Nov. 1803. RUSTICUS ANGLICANUS.

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* I allude to a practice that may be of use where farming is alternately devoted to the raising of poultry, and their productions, for the consumpt of great towns; a mode of farming which, I am informed, is beginning to take place in the vicinity of your Scots metropolis.

A capon is pitched upon as the most economical broods-mother, being of large bulk of body, affording great extent of cover. His breast and belly are plucked almost bare of feathers; he is then shut up in a narrow dark place of confinement, and the chickens hatched by two or three clocking hens, are introduced to him. The heat emanating from his body, attracts the chickens towards him, for fostering warmth; and he too feels comfortable, from the application of their warm bodies to his naked and cold breast and belly. Reciprocal pleasure, thus mutually communicated, attaches them to each other, and he soon learns to perform all the offices of a mother.

BRANCH

BRANCH II.

AGRICULTURAL INTELLIGENCE.

At the conclusion of our last volume, rural operations of every kind appeared to be in a forward state. Wheat had been got sown under favourable circumstances, and to a greater extent than the variableness of our climate generally allows. Ploughing for spring crops was far advanced, a tract of uncommon fine weather having ensued after the conclusion of harvest, which permitted every branch of field work to be executed in a more superior stile than usually can be attained to in the latter part of autumn, or in the first of the winter months. The progress made of late has however been small. Storms of frost and snow prevailed in December. January has been wet, rarely giving two days of similar weather together. In fact, the bowels of the earth are now more completely saturated with moisture than at any time during the four past years.

Under these circumstances, the thrashing of grain has proceeded with vigour, and full supplies have been poured into every market. We are not here to enquire whether this vigour has been stimulated by official recommendations, or excited by the powerful influence of alarm, which, in certain cases, operates as strongly upon men in the field, as upon children in the nursery. Perhaps these causes together with the scantiness of straw have contributed to throw a greater supply into the market than the extent of the crop warranted, or the demand of the country required; which ultimately may produce consequences not beneficial to the public. In some districts we understand the stack-yards are already much diminished. In few of them was the bulk originally equal to that of former years. For wheat, a regular demand seems to prevail; but barley may be reckoned in some measure an unsaleable article every where, and has been sold for much less money than it can be cultivated at. Oats, notwithstanding their general failure last season, have also fallen in price, though still of greater valuecomparatively than barley. Pease and beans maintain a kind of equality, having fluctuated less than any other grain.

Very little alteration has as yet appeared in the cattle and sheep markets, but the quality of the dead articles presented, is, in many instances (mutton especially) of an inferior description. The failure of turnips formerly mentioned, limited

sheep-

sheep-feeding very much; and the weakness of the food, and wetness of the weather, have prevented those put upon this root, from making the usual improvement. An after scarcity seems inevitable, though it is not an easy matter to say when it may take place. An early spring would afford the surest relief; but so many of the young grasses have either failed, or appear to be in so weak a state, that much reliance cannot be placed upon this resource.

Potatoes threaten to be a scarce article soon, being already not much cheaper per peck than oat-meal; whereas, in ordinary seasons, they rarely exceed one half of its price. Hay, in several districts, is also in much demand, though in others it is comparatively plentiful. The bulkiness of the article, and the expence of transporting it to a distance, renders an abundance at one place often of little advantage to others.

MR ADDINGTON, we learn, intends, shortly after the recess, to move in the Lower House of Parliament, for a Committee to investigate the relative abilities of English and Scottish barleys, to pay a tax upon malt; but we have not heard of any preparations being made by the landholders (who certainly are the persons chiefly interested), to bring forward, to the notice of that Committee, any evidence in support of the just claims of Scotland, to be taxed in an inferior ratio to what is levied in the fertile English counties. We formerly stated that the last crop afforded only partial evidence; and recommended, that recourse should be had to the qualities of preceding years, if the subject was to be investigated upon just and impartial principles. The grain of both countries had greater affinity last year than what may again take place for half a century; because the singular dryness and temperature of the weather placed the whole island more upon a level than customary, so far as climate was concerned. Still there is a difference to be found; or how could importers bring down English barley, and find it a saving article, after defraying all charges, unless a greater quantity of saccharine matter could be extracted from the one than the other. An interesting paper on this subject by Dr Keith, will be found in the Miscellaneous department of this Number, p. 49, et seq.

The proprietors and farmers of Norfolk, Suffolk, and Essex, mean also to bring the additional tax of last Session before Parliament, upon another principle; and we think their arguments are so just, that they can hardly fail to meet with suitable notice. They complain of the tax as excessive; depressing agriculture, and discouraging the cultivation of

of barley, the ſtaple article of theſe counties. In theſe averments much truth, we apprehend, will be found, nor does it ſeem poſſible to counteract them, but by ſhewing that the increaſed tax has not decreaſed the quantity of barley malted. It is not ſufficient to ſhew that the amount of the new tax has equalled the eſtimate, becauſe the ſtock in hand at the time being taken, neceſſarily augmented the firſt year's produce; but it ought to be ſhewn, that the malt trade afterwards experienced no declenſion, or in other words, that the old malt tax is not leſſened. If we were merely to reason upon the matter, it would not require many arguments to prove that the doubling of a duty upon any article thereof, muſt decreaſe the conſumption; nor is much conſideration neceſſary, to find out the impropriety of a tax which greatly exceeds the value of the raw article itſelf. In fact, the ſtate of markets proves that the ſale of barley is thereby much impeded; for, notwithſtanding that a leſs quantity was ſown laſt year from a dread of the effects of this heavy impoſition, yet this grain is the cheapeſt of all grains that are raiſed by the farmers of Great Britain.

The value of labour having of late prodigiouſly increaſed, we have been deſired by ſeveral correſpondents to turn our attention to that important ſubject. It requires ſmall reflection to diſcern that the enormous riſe of laſt ſummer upon the wages of maſons, carpenters, and labourers, was chiefly occaſioned by the profuſe ſyſtem acted upon in the erection of barracks, for the accommodation of ſoldiers, in ſeveral diſtricts. That theſe barracks were neceſſary we do not diſpute; but that they were delayed to a late period of the ſeaſon, and then executed at a prodigious increaſe of expence, will not be queſtioned by any one, unleſs he is diſpoſed to ſupport every public meaſure whatever ſhall be its merits. It may alſo be noticed, that the laudable intention of the legiſlature, to introduce improvements into the Highlands, by building bridges, making roads, &c. may likewiſe occaſion a continuation of the evil, if thoſe entruſted with the direction are not guided by prudence and foreſight. On this point, a judicious hint is given by Sir George S. Mackenzie, p. 45, which we truſt will not be neglected. Indeed, it would be matter of regret was a meaſure, originally calculated for the benefit of the Highlands, to turn out eventually prejudicial to the intereſts of the country at large. We are clear, that the artiſan and labourer ought to be well paid, but there is a medium in all things, and extravagant profuſion on the one hand, deſerves equal cenſure as illiberal parſimony does on the other.

The diſtreſſes of the Zetlanders, have lately engroſſed much notice, and it gives us pleaſure to remark, that their ſituation early experienced the attention of that able public officer, the Lord Advocate of Scotland. With an unſucceſsful fiſhery, and

a ſhort crop, the inhabitants of the Zetland iſles, are intitled to the commiſeration of their Scottiſh brethren; and we truſt, that the Imperial legiſlature will not be unattentive to their wants. But when on this ſubject, we cannot avoid remarking, that the rural and political economy of theſe iſles, are inimical to all improvement either of the ſoil or condition of the inhabitants; and that unleſs a material change is introduced, a laſting benefit cannot be conferred upon them. This will ſufficiently appear by the following extract from the ſtatiſtical account of the pariſh of *Walls and Sandness*, the *ultima Thule* of the ancients, written no farther back than 1797, by a gentleman who ſeems to be well qualified for deſcribing the internal circumſtances of this diſtant and neglected part of the Britiſh empire.

'Where manufactures and uſeful employments are eſtabliſhed, 'the populouſneſs of a country forms its riches and ſtrength; but 'where theſe are wanting, too much population becomes its bur-'den. It is like a ſhip's company reduced to ſhort allowances. 'Such is the caſe with this country.

'Beſides, the farms are by far too ſmall, many of them, with-'in theſe forty years being ſplit into triple the number. This has 'proceeded from the impolitic rage for proſecuting the fiſhing; 'but it is accompanied with hurtful conſequences to the tenants, 'as the ſmallneſs of their farms keeps them in indigence. It 'tends only to enrich the landmaſter for the preſent, as he takes 'the products at a much lower price than would be given by a 'neutral merchant; he having the ſame labour from one that has 'only a few merks of land, that he had from the tenant when 'poſſeſſing, formerly, a much greater quantity. Having little 'land, the tenant can rear few cattle to bring him caſh to pay his 'rent, and procure ſuch things as he may need: Whereas, in 'former times, by poſſeſſing more, and being allowed to remain 'thereon throughout the year, without being forced to fiſh for the 'landlord, he was better able to pay his rent, and could live in a 'more comfortable and ſubſtantial manner. From the want of 'leaſes, and the tenant's being frequently obliged to have recourſe 'to his landmaſter for ſupplies in his exigencies, it renders him 'ſervile and obſequious. That manly independent ſpirit, which 'characterizes a free-born Britain, and prevails among the pea-'ſantry in the ſouth countries, is here loſt.—As the tenant has 'only a verbal tack, he promiſing to fiſh for the landmaſter, and 'to give him all his products, and to remain upon the land during 'pleaſure, this proves a bar to all improvements, as he knows 'not if he will reap the benefit thereof longer than one year.'

The confuſion and inaccuracy of the income or property act, is now fully exemplified by the difficulties attendant upon its execution. In fact, notwithſtanding the ſeveral expoſitions which

which have been printed and circulated, many of the clauſes are not read in one way by any two perſons. Except in ſo far as landed proprietors are concerned, the act is not ſpecific and diſtinct; but this claſs of the community are completely laid hold of, and few, if any of them, can eſcape the *maximum* of the tax. The tenantry, in the next place, are more ſeverely ſubjected than others; though we hope it is ſufficiently underſtood that unleſs their rents exceed 120l. they are not liable to the tax at all, nor to the *maximum* of 6d. *per* pound, except the rent is 300l. or upwards. This explanation is given upon the ſuppoſition that ſuch are not poſſeſſed of other funds; for theſe, of courſe, will be added to the rent, and the tax regulated accordingly. The monied and trading intereſts will, as uſual, feel eaſier under the operations of this act. In their caſe, it is a mere income tax; for without poſſeſſing the means, they cannot be ſubjected to payment; whereas the occupier of land is liable, whether he enjoy a halfpenny of income or not. Without inſiſting, however, upon theſe things, or illuſtrating the conſequences of this extenſive and in ſome reſpects incomprehenſible act, it may be ſufficient to ſtate, that the difficulties experienced in its execution demonſtrate the propriety of a reviſal, better than an hundred thouſand arguments. When this comes to be done, we truſt that various alterations upon its principle will be made, and that the landed intereſt will not be inattentive to a meaſure with which the proſperity of agriculture is ſo deeply connected.—*Jan.* 27.

Extracts from private Correspondence.

SCOTLAND.

[The following was too late in coming to hand for the Supplement to laſt Volume, therefore is inſerted here.]

Selkirkſhire.

It will be neceſſary to mention the actual ſtate of things a few years ago, in order to give you a juſt idea of our recent improvements. Not many years ago, there were not above half a dozen farmers in all the county who did not adhere ſtrictly to the outfield and infield ſyſtem. That which we called our croft-land was always deſtined to carry white crops (that occupied with potatoes excepted), and every third or fourth year received in rotation the dung of the farm as a preparation for bear (big) and potatoes. Nature, being thus deprived of her beloved variety, gave often, in return, plenty of weeds, but generally a naughty crop of corn. Turnips were reckoned too delicate a plant to thrive

in ſuch a bleak, mountainous diſtrict; and as every body ſaw they had too much graſs amongſt their corn already, they thought that ſowing it, inſtead of remedying, would but increaſe the evil; hence, the croft-land was ſubjected to a never-ending ſyſtem of white-cropping.

The management of the outfield (which was land prepared for cropping by folding ſheep and cattle upon it), was no better conducted. Not content with two, or perhaps three middling crops, we uniformly perſiſted, in ſpite of every obſtacle, to take four or five crops, and then left it to run to weeds, graſs, or whatever an impoveriſhed ſoil could produce.

But, thanks to a few liberal-minded individuals, theſe cuſtoms, though ancient, are now happily exploded. Turnips are every where cultivated, and generally conſumed in rearing ſtock, as noticed in our report for Auguſt; after which, the land is laid out in graſs for hay or paſture. It is alſo drained where wet, and encloſed. Indeed, this part of the farming economy ſeems to be pretty well underſtood; for there are few farms in the county where the arable land is not encloſed, or encloſing; and, in many inſtances, it is both encloſed and ſubdivided. In ſeveral places, fallowing ſeems to be but imperfectly underſtood; though I am glad to ſee that within theſe two or three years, more attention is paid to it than formerly.

Good roads were, and ſtill are, very much wanted; but, in the courſe of laſt ſeaſon, much has been done this way. Two bridges have been built over the Ettrick, and one is intended over Yarrow. A new road is alſo cut, and cutting, where the old one was ſteep, or otherwiſe inſufficient, from Selkirk to Moffat; another, though of only local advantage, is forming up the Ettrick; and a croſs-road is alſo ſtaked out, to run through the middle of the higher part of the county, betwixt Tweeddale and Tiviotdale. Theſe, when completed, bid fair to be of great utility to a conſiderable part of our farmers, for conveying more ſafely, or, at leaſt, in a leſs circuitous manner, farm produce to market, and farm conſumption home, ſuch as lime, marl, coal, &c.

Liming and marling are every ſeaſon coming more into uſe; and moſt of the farmers, even in the higheſt parts of the county, have done a little this way, although both are procured at great expence, on account of the diſtance, and badneſs of the roads.

All the ploughing is performed by the Engliſh plough and two horſes. Oxen are everywhere fallen into diſuſe; and are nowhere employed, ſo far as I know, for performing farm labour.

Irrigation was lately introduced, as mentioned in our laſt; and it is certainly a pity the practice is not more generally diffuſed, as it would render a conſiderable part of the county leſs dependent, for winter fodder, on bog hay, which, at beſt, is but coarſe, and its growth precarious. Rather leſs land is cultivated than formerly, as the farmer is convinced there is more to be got from three acres in good heart, than from four in an impoveriſhed ſtate.

As capital has been rapidly increaſing within theſe few years, ſo the farmer

farmer can ſpare more for his own convenient accommodation, for purchaſing the comforts, and even the luxuries of life; and thereby promote the encouragement of trade, and give employment to uſeful artiſans. Elegant houſes are built and building in many parts of the county; portions of ground are planted both for uſe and ornament; gardens are cultivated in a ſuperior manner; and, in ſhort, the whole farming economy is carried on in a more enlightened and perfect way, even in a way which clearly manifeſts the growing proſperity of a free, enlightened, and happy people.

Much attention has of late been paid to the introduction of the Cheviot breed of ſheep. But we are not certain that, in every reſpect, this is an improvement. The returns that have been hitherto made, leaves it rather uncertain which are the moſt profitable. Some of our beſt Highland ſtoremaſters retain the foreſt breed, and ſome, after trying the Cheviot, relinquiſhed them as unfit for our mountainous diſtrict.

Letter from an Extenſive Farmer in Annandale, January 10.

'Our cattle markets were lower at the end of the year than in ſummer and autumn. I was lately up in Norfolk with the ſtock of cattle which I had kept laſt year, chiefly Highland bullocks, but was not paid well, ſales being dull, and prices much reduced. I was ſurpriſed to find barley at ſuch a low price in Norfolk. When I went there in November, it was ſelling at 12s. 6d. per coomb of four Wincheſter buſhels; but when I left the county in December, the price did not exceed 10s. 6d. I do ſomething conſiderable here in the corn trade, by ſhipping barley and oats for Liverpool and other ports; and, lately, a large order for the former grain was received from Dublin at 9s. the Carliſle buſhel, which is equal to three of Wincheſter, but the order was ſoon countermanded. However, I have bought about 2000 buſhels at 8s. 6d.; though, if matters do not brighten up, the concern will not be a good one. At preſent, I am ſhipping common oats at 8s. and potato ones at 9s. per Carliſle buſhel; but, from what I can learn, even theſe prices do not promiſe to be ſteady. Our barley is good, and in excellent condition, this ſeaſon. We have few peas and beans; and wheat has a dull ſale at 20s. per Carliſle buſhel, of our beſt quality.

'I have been aiming theſe two years paſt to introduce the Leiceſter breed of ſheep here, and have this year put 140 ewes of that kind to the tup, which I hope will prove a beneficial meaſure. I hired tups for two ſeaſons from Mr Culley, and this year have one of the ſame kind from another breeder. I have great expectations that ſtock of this kind will pay handſomely, as I ſold my wedder hogs in Auguſt and September laſt at 55s. per head—ſome of them weighed 26 lib. per quarter. My ewes at preſent are thick fat; indeed they will not be poor if any degree of juſtice is given them; and their condition is rather unfavourable to their lambing ſafely.

'Beef and mutton ſell about 6d. per lib. avoirdupois; but pork is a low article, not worth more than 4s. 6d. or 5s. per ſtone of 14 lib. A

great number of ſwine are fattened in this diſtrict; and many of our ſmall farmers were in uſe of paying their rents with the produce of this ſtock. Hay is 6d. and 7d. per ſtone of 24 lib. which is not a price much more than its worth for litter. Maſons and carpenters are 2s. per day with victuals, and labourers 1s. 2d. with victuals, or 1s. 8d. and 2s. without them. If produce continues at ſuch reduced, and labour at ſuch increaſed rates, the ſituation of farmers in every diſtrict will ſoon be truly diſtreſſing.'

Tweeddale Quarterly Report.

THE weather continuing remarkably good from the beginning of Autumn to the firſt of December, harveſt work was not only finiſhed in the moſt ſatisfactory manner, but winter ploughing conſiderably advanced before any interruption was experienced. Much labour was of courſe performed without conſuming fodder; as the foggage, though far from being luxuriant, furniſhed a longer ſupply of food than cuſtomary to the horſes and wintering cattle, which, as our crop was of little bulk, proved a favourable circumſtance. Even at this time paſtures have a freſh appearance, as the froſts have always been accompanied with a ſlight covering of ſnow; and this has alſo permitted a full uſe of the turnip crop, both for ſtall and field conſumption. Perhaps this crop has exceeded the expectation of our farmers more than ever remembered, as the progreſs in bulbing, during the months of October and November, ſurpaſſed very much that of former years. This ſeems to prove that turnips receive much nouriſhment from the atmoſphere; for, in the above months, ſo little rain fell as ſcarcely to moiſten the ſurface of the drills; ſo that when the turnip was pulled, in the firſt of November, for houſe-feeding, the root came out as dry as if it had ſtood among aſhes. The crop, however, was then making rapid progreſs; the weather was mild, and the night dews copious; to which cauſes their uncommon progreſs may be attributed.

Our grain crops, though ſcanty in ſtraw, are turning out tolerably well, both in barn and miln, and, I believe, will produce as many bolls as gained laſt ſeaſon. Oats in general yield meal for corn. Barley and bear are good in quality, but not in demand, which muſt greatly diſcourage agricultural improvement. In this county, almoſt the whole of the arable land, being adapted to turnips, that root is univerſally raiſed, and conſumed by ſheep; by which means the ſoil is greatly enriched. We look forward to the ſucceeding crops (barley and oats) for indemnification of our expence; but as neither the ſoil nor climate admit of wheat, and we have no permanent market for hay, without driving it to a diſtance, which the bulky nature of the article will not allow; therefore, if our demand for barley fails, oats muſt in future be the only grain cultivated. We raiſe conſiderable quantities of peas, in the lower diſtricts of the county; but our views in cultivating this grain are confined more to ameliorating than lucrative crops.

A regular rotation of cropping has been ſucceſsfully adopted upon many farms for ſome years paſt; and more than double rent is now given

given for land. Moſt of our leaſes bind the tenant to practiſe rotation huſbandry; but if an alteration does not ſoon take place in the Exciſe laws, our preſent ſyſtem will be knocked in the head; for few people will cultivate an article they cannot ſell. Upon ſuch diſtricts as Tweeddale, the increaſed malt-tax operates with much more ſeverity than upon thoſe ſituated in a more favourable climate. Here barley is the ſtaple grain commodity, conſequently any obſtruction to the ſale thereof muſt be attended with fatal conſequences. In other diſtricts, where wheat forms the principal crop, the tax can only expoſe cultivators to a partial evil, as they have it in their power to renounce the culture of a grain which, at preſent, makes a worſe return than any variety of the culmiferous tribe cultivated in Great Britain.——*Jan.* 11.

Letter from a Farmer in Dumbartonſhire, January 13.

'We had ſome warm weather through the ſummer months, which cauſed our corn crops to turn out well. Several fields, originally injured by the grub-worm, revived much afterwards; and the whole of our grain being completely ripened, and ſafely harveſted, renders the quality ſuperior to that of our average produce.

'Markets, at the preſent time, ſeem rather overſtocked, and prices are lower than was generally expected. Perhaps theſe things may be occaſioned by the deficiency of ſtraw, as a greater quantity of grain muſt be thraſhed than uſual before the neceſſary ſupply of provender can be procured to the beſtial; but this ſuperabundance cannot laſt long, for ſeveral ſtack-yards are already more than half emptied. A large proportion of the land with us is prepared for the ſeed, the goodneſs of the weather having permitted ploughing to go briſkly forward. Hay, which in Auguſt was 5d. per ſtone, now ſells at 9d.'

Banffſhire Quarterly Report.

From the date of laſt report, till about the end of November, we were favoured with weather in every reſpect propitious to the operations of the farmer. The paſture fields, continuing in a ſtate of verdure, admitted the cattle to be kept out at leaſt a month beyond the ordinary time of houſing—a circumſtance highly advantageous in this ſcarce year of provender. But, notwithſtanding of all this ſaving being made, ſtraw is ſtill like to be in great requeſt. Oats and fodder have been ſold as high as 35s. and 40s. per boll: this, when thraſhed, perhaps would bring no more than 16s.; and if made into meal, little or nothing more. Hay, however, has not riſen much, and can be got at 1s. per ſtone: this diſproportion very often happens in times of ſcarcity; but, it is evident, muſt be a great error. The young graſſes that remained in a dormant ſtate during the ſummer months have come forward ſufficiently to endure the winter froſts. A greater extent of wheat was ſown than ordinary, on account of turnip failure, and makes a very good appearance. Although our grain markets have ſuſtained great depreſſion, the price of labour is rather on the riſe: our ſervants

vants are moſtly kept in the houſe in this country; and a ploughman gets from 7l. to 7 guineas in the half year. Tradeſmens' wages are likewiſe very high: a maſon gets from 2s. 6d. to 3s. a day; and wrights 20d. to 2s., with victuals. Theſe, and various other expences which the farmer is loaded with, muſt be ſeverely felt by many in this diſtrict; particularly thoſe of ſmall capital, and who have recently got their leaſes renewed with the landlord. However, the ſtricteſt unanimity prevails at preſent; and we ſincerely hope, when theſe eventful times come to a criſis, that the Legiſlature will have the farming intereſt more in view; which is not the leaſt material part of the national concern. Fat cattle have not yet exceeded 8s. per ſtone, ſinking offal; but a conſiderable riſe is ſoon expected, as the markets cannot have ſo full a ſupply when the ſpring commences.——*Jan.* 15.

Letter from Falkirk, Jan. 16.

'With the political horizon extremely clouded on every ſide, and each ſucceeding day anxiouſly looked forward to, and expected to produce ſome great event, it afforded ſome conſolation to reflect that the abundance of laſt harveſt would enſure plenty at home, whatever might be the ſtate of the crops abroad, and that we ſhould not be dependent on foreign ſupplies for our daily food; a neceſſity, at all times to be deprecated, but, in the preſent ſtate of things, a moſt direful calamity. In that general ſentiment, and knowing that even a full average crop was ſcarcely equal to the conſumption of the country, the farmer might have cordially joined, under the expectation that his crops, although they could not be expected to reach a very high price, would yet afford him a decent return, at leaſt ſufficient to meet the increaſed and increaſing demands on his produce. But this has by no means been the caſe; and the preſent low, and ſtill declining rate of markets, and increaſing rate of every thing elſe, muſt inevitably involve many in inextricable difficulties. Whether the threatened invaſion, ſo long held *in terrorem* over our heads, has been a principal cauſe, by the effect it certainly has had in preſſing prematurely into the market an over proportion of that ſtock which is to carry us through the year; or to what other cauſe it may be aſcribed, I pretend not to determine. However this may be, certain it is that the preſent low prices would induce us to think very differently of the laſt crop, from what we would have concluded from the combined communications from almoſt every quarter of the kingdom. If too conſiderable a quantity has been prematurely thrown on the market, it may perhaps (to uſe the words of the ingenious Findlater) turn out to be 'firſt a burſt and then a faſt.' The preſent prices in our maket may be ſtated—Wheat, 22s. to 25s.; barley, (if any price can be quoted, for from the language of the buyers, we would think they would ſcarcely accept of it as a preſent), 14s. to 16s.; oats, 15s. to 17s.; beans, 16s. to 19s.

'The young wheats are looking extremely well; and graſſes, although by no means promiſing, are better than they appeared at harveſt time.

The

The uncommon fine weather ſince harveſt has permitted ploughing to be far advanced, even in our clayey diſtrict, (an uncommon occurrence); it ſcarcely met with any interruption till the froſt ſet in. The preſent circumſtances of the country have put an entire ſtop to almoſt every improvement beyond the ordinary routine of farm operations; neverthe leſs, the wages of labourers are very high,—maſons and carpenters from 15s. to 18s., and labourers from 9s. to 12s. per week; but, at ſuch rates, it will always be found moſt adviſeable to have all work that can poſſibly be executed by the piece, done in that way; for it almoſt ſeems a ſort of eſtabliſhed principle, that the higher the daily wages are, the leſs work is done. The property tax has not excited ſo ſtrong a ſenſation here amongſt the farmers, as in many other places; becauſe, being generally on a ſmall ſcale in this diſtrict, few of them are reached by it at all; and they are not aware that the principle of it may, at one time or other, apply to them with a vengeance. Why any hypothetical *data* ſhould be aſſumed on which to aſſeſs the profits of the farmer, more than thoſe of the manufacturer or trader, is a queſtion to which no good anſwer can be given. It will ſurely not be ſaid that the farmer is a leſs virtuous ſubject than the other, conſequently leſs likely to make a fair return of his real annual profits. I can diſcover no other reaſon than this, that the farmer, like the quiet beaſt he employs, tacitly ſubmits to the burden without a murmur; whereas, the others, at ſimilar treatment, would have briſtled up like hedgehogs, ſent the hue and cry from one end of the kingdom to the other, and endeavoured to perſuade the nation that their intereſt, no doubt more connected with the ſhuttle and the hammer than with the plough, would be ruined by the meaſure. As many farmers and other plain men are a good deal puzzled with the intricacies of the property act, perhaps the following particulars may aſſiſt ſome who have not yet returned their ſchedules, or enable them to amend them if returned on erroneous *data*. The way in which they are aſſeſſed to the landlord's part is very plain; but the tenant's is not equally obvious. From the act, I conceive that they are to deduct from the annual value of their poſſeſſions, if not ſubject to tithes, *one eighth*; and if ſubject to teind, then ſuch a ſum as, together with it, will amount to one eighth. After this deduction is made from the annual value, then one half of the remaining amount is the ſum on which the tenant's tax is to be aſſeſſed in Scotland. From this it follows, that unleſs the annual value of his poſſeſſion exceeds 137l., he is not liable to the tax at all, inaſmuch as his income, eſtimated according to the act, would not amount to 60l.; and alſo, on the ſame principle, the annual amount of his poſſeſſion muſt exceed 340l. before he is liable to the *maximum* tax. In England, the deductions are the ſame; but the tenant's income is taken at three fourths of the annual value of his poſſeſſion. I have no authority to vouch for the above interpretation of the act, which is not a little obſcure; but, on a careful peruſal of it, as well as the expoſition thereof, it appears to me the ſtrict letter, if not the legitimate intention of it, as to the manner of aſſeſſing the

tenant's duty. It is done with the view of equalizing to the tax, thoſe who are tithe-free, and thoſe who are liable to that burden. It will ſo far have this effect, where the tithe is not equal to one eighth of the annual value of the poſſeſſion, as may be generally the caſe with us in Scotland; but it is for our ſouthern neighbours, who pay tithe in kind, to point out how nearly an eighth of the annual value of their poſſeſſions, and the tithe in kind will generally approximate.'

Roſsſhire Quarterly Report.

For theſe three months paſt, we have had, upon the whole, very favourable weather for carrying on the agricultural concerns of this diſtrict. The crops were all ſecured in good order; but, owing to the drought of ſummer, bulked very poorly in the ſtack-yards. The wheat ſeed was finiſhed in fine condition, and a greater breadth than uſual got ſown. Wheat was our only average crop, being tolerably bulky and of fine quality. Barley is defective in bulk and quantity, but yields more than a common proportion of ſpirits. Oats, our principal dependence, were of very little bulk, and poor in quality. Turnips, even where a braird was procured at the proper ſeaſon, are but a middling crop; but in many places they entirely failed. Potatoes can hardly be ſtated as up to an average, and the quality is generally very indifferent.

Our markets are dull, though nominally high. Barley, from 22s. to 30s. per boll; oatmeal, from 24s. to 26s. per nine ſtones; oats, with ſtraw, have been ſold at 30s. per boll of five firlots, which would not produce above ſeven ſtones of meal. This may ſhow the value of fodder with us this ſeaſon. Indeed, three times the uſual price has been given for wintering cattle on ſtraw. Hay was a light crop; but a conſiderable quantity of old ſtock being on hand, it has not ſetched above 1s. 6d. per ſtone. Our cattle markets have declined ever ſince the month of Auguſt; and, by Martinmas, a lean beaſt could not be ſold upon any terms. The prices in the ſouth, from what we could learn, did not warrant ſuch a depreſſion as took place here; but various circumſtances concurred to produce a ſtagnation; one of which, and not the leaſt, was the want of credit at the Banks. From ſome cauſe, beſt known to the Bank directors, they had ordered their agents in this quarter to narrow the diſcounts; ſo that money could not be raiſed, in the uſual way, for purchaſing the cattle; and theſe orders were ſo ſudden, that the drovers had not time to be otherwiſe prepared. When the commerce of a country depends almoſt entirely upon paper as a circulating medium, great caution is neceſſary in thoſe who have the management of that currency. In banking, as in other trading concerns, the directors have no doubt a right to make the moſt of the capital entruſted to them; but they ought alſo to have ſome regard for the country at large with whom they deal. It is well known, that when the 3 *per cent.* conſols are at 60 or upwards, the Scotiſh Banks are moſt anxious in preſſing their paper into circulation, by freely diſcounting bills and granting caſh-accounts; thus raiſing and encouraging a ſpirit of ſpeculation in

commerce,

commerce, manufactures, and agriculture, which otherwiſe would not have exiſted. When theſe ſpeculations are ſet afloat, it is ſurely a cruel meaſure ſuddenly to withdraw the aid granted to thoſe concerned in them, and without which they cannot be carried into effect; thereby completely blaſting undertakings, which, with a more ſteady capital, might have been carried on with profit to the owner, and benefit to the community.

Several proprietors in this county have availed themſelves of the act paſſed for commuting the ſervitude of thirlage; but, however beneficial its effects may ultimately prove to the country, the deciſions given have certainly bore hard, in the firſt inſtance, on the parties formerly thirled. It appears, on the examination of witneſſes, that the duties paid were under different denominations; a certain part being allotted for the proprietors as multures and right of thirlage; another part alſo paid the proprietor to uphold the mill; and another duty paid to the millers as their wages. The proprietors, in moſt caſes that have been tried, had alſo claims for certain ſervices; ſuch as, keeping the mill-lead in repair, bringing home millſtones, &c. Theſe things being clearly ſtated to the Judge and Juries, it became then their duty to conſider what proportion of theſe duties, ſervices, and preſtations, the proprietor was entitled to; and the deciſions in general were, that the proprietors were found entitled to full value for all duties paid, except that part which was always appropriated as millers wages; and, in ſeveral caſes, a ſum of money was allowed in lieu of ſervices. The Juries were, however, by no means unanimous in the deciſions given; it being warmly contended, and with good reaſon, that proprietors were not entitled, by the ſpirit of the act, to *pocket* more than they had formerly done; as, in this view of the caſe, the parties thirled, ſo far from being relieved from bondage, had an additional burthen laid upon them, they being compelled to pay for *upholding* a mill, which the proprietor might keep up or not, as he thought proper, and from which, at all events, they could not derive any benefit.——*Jan.* 18.

Dumfrieſſhire Quarterly Report.

The weather, for the laſt three months, has been variable and in extremes to an uncommon degree. There has, notwithſtanding, been a good deal of agricultural labour performed. Wheat was ſown in the end of October, on potato land, in good order; and, though it has been kept long under ground, it is now up in full ſtrength. The ſtubbles for fallows and green crops have been ploughed. During the froſt, the ſtraw yards were cleared, and the dung put up on the headrigs of land for turnip and potatoes; an eſſential matter now coming to be ſeen into by all farmers, not only for the facility of labour in April and May, but alſo for bringing the manure into a proper ſtate for uſe.

The general fall of ſnow in November and December, was like to be ſevere for ſtocks of ſheep in the higher parts of the county, not

from

from the depth of it, but from being plated with ice. When the ſtocks were brought to the extremity of *flying* to the lower parts of the country, they were relieved by the ſoutherly breeze of one day. Variable weather, and frequent falls of rain, are conſidered fully worſe for ſheep, in all ſituations, than ordinary ſtorms, and more dangerous for their conſtitutions, and have always bad effects if the ſpring ſhould happen to turn out ſevere. This, we ſee from experience, is the circumſtance on which moſt depends the ſtock or quantity of animal food which can be brought to market; and from this it ariſes, that the greateſt improvement to be made in Britiſh agriculture and farming, is the increaſe of ſpring food for ſheep and cattle, not only for the preſent ſupply of markets, but for rendering all ſtocks more generally independent of the effects of bad ſpring weather, and fitting them for getting more immediate advantage from the ſummer paſtures. This is happily coming to be now attended to by improving farmers. But none, except thoſe who have had ſome experience, can have an idea of the difference of the growth and feeding upon ſummer paſtures, whether coarſe or fine, of either aged or young ſheep, or cattle fed even in a ſmall degree in the ſpring with turnip, from thoſe which have been kept upon fodder or winter paſtures only.

The crop of laſt year turns out productive, rather beyond an average, as is generally the caſe after a dry and warm ſummer; and all is of good quality. Wheat, from 60 to 63 lib.; barley, from 50 to 54 lib.; and oats, Common and Frieſland kinds, from 38 to 40 lib.; potato oats, from 42 to 45 lib. the buſhel. Prices—Wheat, from 6s. 6d. to 7s. 6d.; barley, from 2s. 8d. to 3s.; oats, from 2s. to 2s. 6d.; potato oats, 3s. the buſhel. The ſuperior quality of the potato oats is allowed by all; but the greateſt advantage is reaped by thoſe who have them on ſtrong land in good order. The profit to them, is at leaſt one half beyond that on common oats. The moſt general fault in raiſing theſe oats, is allowing them to become too ripe; much of the grain is thereby loſt, and the fodder deprived of ſubſtance. Every ear ought to have ſome of the lower pickles greeniſh when cut, and even theſe will be good oats when thraſhed.

The fall in the price of cattle and ſheep, ſo general over the kingdom, has affected the dealers and farmers in this country in no inconſiderable degree. The dealers had all ſome loſs. Thoſe who drove to the *far ſouth*, as it is termed, had loſſes to ſo great an extent, as to affect the credit of ſeveral of them, whereby the injury became very general. The loſſes to the dealers in ſheep have not been ſo extenſive, owing to their ſales taking place more recently after their purchaſe.

This fall of prices ſeems to have been unavoidable. It proceeded from the ſame cauſe with the fall of the price of corn;—the good ſeaſons, the abundant growth which has increaſed all kinds of ſtock, and the extraordinary crop of lambs for three ſucceſſive years. Theſe were ſo far beyond the conſumption, that the markets and the country would have been ſooner overſtocked, had it not been for the very uncommon

loſs

loſs of ſheep, and other deficiencies occaſioned by the cold and wet ſeaſon of 1799. Till ſuch cauſe ſhall again, in ſome degree, leſſen ſtocks and produce, it cannot reaſonably be expected that prices ſhall riſe, or even keep at what they are. The extra conſumption of ſuch times as the preſent, when thouſands are provided with more than double their uſual quantities of food, will equal but a very ſmall increaſed produce given by a good ſeaſon. This points out, that the heads and hands of the inhabitants of this iſland ſhould never ceaſe in exerting their genius and invention for the ſecurity of their ſtock and crops againſt changeable and inclement ſeaſons. This is not to be done ſo much by raiſing produce upon a greater ſcale, as by increaſing the growth of early corns, winter vegetables for ſtowing, or which are not ſuſceptible of ſpring froſts, and ſuch management by manure, and the deſtruction of weeds, as will moſt likely inſure the produce to be beyond the ordinary, both in quality and quantity, in proportion to the extent of land in culture. Theſe matters deſerve the attention, not of farmers alone, but even of that ſociety of noblemen and others, who, by their laudable exertions to promote the improvement and good of their country, deſerve the gratitude of all ranks of their contemporaries and of poſterity.——*January* 19.

Inverneſs-ſhire Quarterly Report.

What was ſtated in laſt report reſpecting the crop, is fully verified by facts, it being now aſcertained that both corn and ſtraw are leſs plentiful than hitherto known in this diſtrict. All that can be ſaid in its favour is, that the grain is of good quality, having been well ripened and ſafely harveſted. We have already had a good deal of importation from the ſouthern diſtricts and from England, and much more will ſtill be wanted before the arrival of next crop. The winter having ſet in early, occaſioned many farmers to look about ſharply for provender to their cattle, which is ſcarcer than ever I witneſſed; and unleſs we have a continuation of open weather, hay and ſtraw muſt advance to an enormous price. Wheat is ſelling at 25s. per boll; Barley, 26s. to 28s.; Oats, 24s. to 25s. per boll of five firlots; Oatmeal, 24s. to 26s. per boll of nine ſtone; Bear-meal, 18s. to 19s. per boll, of ten ſtone; Barley and Oats *with fodder* have already been ſold at 50s. per boll; the latter per boll of five firlots; and Hay 1s. 8d. to 2s. per ſtone, of 24 lib. avoirdupois.

Our turnip crop being very indifferent, not half the uſual number of cattle were put to the ſtake; conſequently the butcher market muſt be ſcantily ſupplied at the latter end of ſpring. At preſent, Beef, in retail, ſells from 6d. to 8d.; Mutton, 6d per lib. Amſterdam.—The wages of journeymen maſons, laſt ſummer and autumn, were 16s. to 20s. per week; Carpenters 10s. to 12s.; Labourers, 7s. 6d. to 9s. If the grand Caledonian canal, and the intended roads and bridges go on next ſeaſon, wages will of courſe riſe conſiderably. With a view to the Canal-trade, ſeventy-five acres of arable ground have been

been ſet upon a three hundred years leaſe, for 600l. *per annum*, ſeventeen acres of which have been already ſubſet at twelve guineas per acre, and the ſubtenant is letting this portion out in ſmall building lots at a conſiderable profit.—*Jan.* 18.

Mid-Lothian Quarterly Report.

THE current quarter is remarkable for the changeableneſs of the weather, and the lowneſs of the markets for grain. The former, however, has not been unpropitious to the operations of huſbandry;—ploughing, in conſequence, is well advanced; but the latter is ſelling (where ſales can be made) at a rate much below what farmers can afford. It is hoped, however, that this depreſſion will only be temporary; for, ſhould it be otherwiſe, and the capitals of thoſe who cultivate the ſoil be allowed to diſſipate, the effect might be ſilent, but certain, and perhaps would even be more to be dreaded than the arms of France. To quote prices is difficult, as thoſe of every ſucceeding week are lower than the one preceding, and barley is literally without a market. It would be for the public intereſt, that thoſe who have no immediate uſe for the ſtraw, and can otherwiſe make a ſhift for money, would bring as little grain to market as poſſible, under preſent circumſtances; for it is too obvious, that the recommendations of thoſe in power, to thraſh out, from the dread of invaſion, has been carried to an unwarrantable height, and may ultimately not only prove injurious to many individuals, but to the whole community.

Vegetation hitherto has met with no check. Wheat, young graſs, and rich paſtures, look as well and green as is uſual in the month of May, and many buſhes are budding; but this premature vegetation commonly meets with a check at a more advanced period of the ſeaſon, which is far more hurtful to the growth of plants, when the ſun is high, than the ſame ſevere weather does when he is low, and days are ſhort.

Several *ſets* of paſture graſs have already taken place, at a fall of 25 *per cent.*, and in ſome inſtances a great deal more. Yet, from the greatly increaſed expence attending cultivation, and the low price of grain, it is judged better to continue the lands in paſture, at an inferior rent, than to bring them under the plough.

The butcher markets continue fully ſupplied, without any material alteration in price. Thoſe who had a few turnips remaining after the depredations of the caterpillar, were induced, from the fall of markets, to put a greater ſtock than uſual upon winter keeping, which being ſoon exhauſted, occaſions a prolongation of the former *glut*, and will probably continue it for ſeveral weeks hence.——*Jan.* 20.

Letter from a Gentleman near Perth, January 23.

'The ſmart froſt in November did much injury to the tops of our turnips; but as it did not continue long, the roots were not materially hurt; and at this day they continue of good quality, a rare one excepted. Of late we have had rather blaſty weather, but I think the young plants

plants of clover have been benefited by the rains, and the wheats appear, in every place, ſtrong and vigorous. The winter has alſo proved favourable to ſuch as were apprehenſive of their fodder not holding out. It was generally allowed that the crop in this quarter was of far leſs bulk than ordinary, but people differed widely in opinion as to the quantity of grain it would yield. Though the markets are juſt now glutted, and prices on the declining hand, theſe things cannot be conſidered as ſufficient proofs that the crop is more productive than cuſtomary; there being reaſon to believe that if it had come to market in a manner proportional to the quantity on hand, no ſtagnation would have been felt. Some months muſt however paſs over, before this obſervation can be fully verified. In the mean time, the growers muſt feel that the prices of the preſent day are far ſhort of a fair indemnification to them, all things conſidered.

'So far as I know, the wages of maſons at preſent average 2s. 6d. per day; carpenters 2s. 3d.; labourers 1s. 4d. to 1s. 8d. Maſon work per piece—building and preparing mortar 2l. 2s. to 2l. 12s. 6d. per rood; building and furniſhing all materials 6l. to 7l. per rood. Ploughmens' wages 12l. 12s. *per annum*, with 6½ bolls of oat meal, *ſap*, ſalt, and lodging.'

Letter from a Farmer near Kelſo, Jan. 24.

'So far as the winter has gone, it has proved favourable for farming operations; conſequently, labour is tolerably well advanced. We are now ploughing the ground cleared from turnips, with a view of preparing it for ſpring wheat; and ſome people, during the two or three paſt good days, have been ſowing that grain. The turnips are laſting longer than their original appearance warranted to expect, having grown conſiderably ſince the beginning of November. Several fields remain for diſpoſal in this neighbourhood.

'The ſtack-yards with us were by no means bulky this ſeaſon, and apprehenſions are entertained that they will be nearly empty at Whitſunday. The crop, however, turns out very productive to the bulk, and a market is wanting for the quantity that is thraſhed. This has induced ſeveral farmers to keep off as much as poſſible from ſelling; but the want of money will prevent this meaſure from becoming general. Our corn merchants ſay, they have plenty of commiſſions to purchaſe, but cannot command caſh; which, of courſe, impedes ſpeculation, and will occaſion heavy ſales till the preſent glut is removed. At this time, Wheat is ſelling from 30s. to 33s.; Barley, 14s.; Oats, 14s.; Peas, 20s. to 21s.; all per Berwick boll of ſix buſhels. No beans have yet been preſented.

'For ſome time paſt, our graſs fields have exhibited an amazing verdure for the ſeaſon of the year; and perhaps this may afterwards prove hurtful to the ſheep ſtock that depend upon graſs alone. Markets for fat cattle and ſheep are not good, as we have a conſiderable quantity of the latter ſtill on hand, which muſt be diſpoſed of; but it is ſuppoſed

ſuppoſed that, in the courſe of a few weeks, theſe articles will bring laſt year's prices.'

Letter from Glaſgow, January 24.

'Since writing you the 19th October laſt, about 10,000 bolls of wheat have arrived in the Clyde from America. We have alſo had a conſiderable ſupply of that grain from the North and Eaſt of Scotland; which, with great quantities brought in from the country around, have rather, for the preſent, glutted our market, and prices in conſequence have declined conſiderably. The farmers in this neighbourhood have had very large crops of this grain laſt year, and the quality in general has turned out much finer than for ſome years paſt.

'The Iriſh ports having been ſhut, for the quarter now ending, againſt the export of oats, the only ſupplies of that grain we have had during that time, have been from Northumberland and the South of Scotland, which, with what farmers have brought in from the country, have fully ſupplied our market; and for theſe ſome weeks paſt, prices have been on the decline. We are of opinion that a great part of the oats in the neighbourhood are already brought to market, and that we muſt ſoon look to another quarter for a better ſupply. This we may have from Ireland by the end of next month; it being the general opinion, that the export of oats will be allowed from thence by that time: beſides, we ſtill expect a conſiderable ſupply of this grain from Galloway, ſhould the Liverpool market not hold out better prices than ours. From our ſtock of grain on hand, eſpecially of wheat, and our views of further ſupplies, we think prices will not advance much here for ſome time to come.

'Trade has been very dull here for theſe three months paſt, and as yet there is but little proſpect of a ſpeedy revival. The buildings which were erected here through the laſt ſummer are now finiſhing; but, by all appearance, that buſineſs will not be carried on to any extent the enſuing ſeaſon. Carpenters wages, which were once very high, are now at 15s.; Maſons, 10s. and 11s.; and labourers 9s. per week.

'State of Glaſgow Markets, January 24.

Canada wheat,	24s. to 26s.	per 240 lib.
Dantzic ditto,	31s. — 32s.	per boll Linlithgowſhire meaſure.
Scotch ditto,	26s. — 28s.	
Barley,	20s. — 21s.	ditto Stirlingſhire ditto.
Beans and Peas,	19s. — 21s.	
Potato oats,	20s. — 22s.	
Small ditto,	16s. — 19s.	
Oat meal,	18s. — 21s.	ditto of 140 lib. Engliſh.

Hay in quantities, 9d.—in retail 10d. per ſtone.
Straw in ditto, 3d.— ditto 4d. ditto.'

Fiſe

Fife Quarterly Report.

After harveſt the weather was highly favourable for preparing and ſowing wheat; and through winter has been, on the whole, open and temperate. A greater quantity of wheat was ſown than cuſtomary, which makes at preſent a beautiful appearance.

The grain of crop 1803 is much ſuperior to that of the former year. Oats, however, were generally a thin crop, and do not turn out many bolls per acre. The demand for barley is very limited, and prices are daily falling. A conſiderable part of crop 1802 remaining on hand, occaſions this ſpecies of grain to prove a heavy article to the farmer. Many people do not know what to make of it, the intereſt of the diſtiller inducing him to import Engliſh barley; and ſome of them have declared they would not pay the malt-duty, even if the farmer would give them the barley of crop 1802 for nothing.

How rents are to be paid under theſe circumſtances, is a problem not eaſily ſolved. Thoſe who are about to renew leaſes, ought, in making offers, ſeriouſly to reflect upon theſe things, if they wiſh to avoid ruin; and it is no leſs the buſineſs of the landholder and legiſlator to inveſtigate the cauſes of, and endeavour to remove an evil, which threatens to affect the value of landed property materially. Inferior grain cannot be uſed in a profitable way, except in diſtillation; but high duties effectually prevent diſtillers from purchaſing it, and give a decided preference to grain of ſuperior quality.

Oat meal continues reaſonable in price, never above 20s., nor under 16s. per boll of eight ſtone, and the markets are well ſupplied. Potatoes were an unproductive crop, and are now ſelling at 9s. to 10s. per boll. The demand for wheat is dull, and prices about 23s. per boll.

Owing to the failure of turnips, the number of fat cattle is not great, which has kept up the price of beef. For lean cattle there is little demand, and prices continue falling. Grazing in this county turned out a bad concern laſt year; many of the graziers having loſt one third, others one half, and ſome even the whole of their rent, thoſe of the laſt claſs having ſold as cheap as they bought: therefore it is ſuppoſed that graſs rents muſt fall this year conſiderably.

The wages of workmen and tradeſmen, and the price of wood, iron, and every other article uſed upon a farm, are advanced beyond precedent. Theſe, with the want of a market for farm produce, are certainly not calculated to advance improvement; but muſt in the end depreſs the tenantry, and leſſen the rent-rolls of proprietors.—*Jan.* 23.

Eaſt-Lothian Quarterly Report.

The months of December and January furniſhed variable weather, which of courſe impeded field-work conſiderably, and even leſſened the value of ſuch operations as were executed. It is a comfortable circumſtance that an increaſed quantity of wheat was put into the ground in the

the moſt favourable manner; for, in the preſent view of rural matters, little dependence can be placed upon a ſpring ſowing of that grain. Indeed, the portion of turnip land already ridged up is inconſiderable, the rains through the month having reſtricted ploughing to the graſs lands; but many of theſe, unleſs favoured by froſt, have been turned over in a ſtate which by no means will forward the harrowing proceſs, or prove beneficial to the ſucceeding crop.

Whether the wetneſs of the weather has occaſioned thraſhing to be more attended to than uſual, or whether that operation has been haſtened by other circumſtances, cannot be poſitively aſcertained; but it is certain, that a greater quantity of grain has lately been preſented for ſale, than the demand of the market required. This, as muſt always happen, has occaſioned a conſiderable reduction of prices, though hitherto ſtill not in the degree that has occurred in ſeveral other diſtricts. Barley and oats have felt the chief depreſſion; the former grain is generally of good quality; but few of the latter, early kinds excepted, are above mediocrity. Potato oats have chiefly been purchaſed by the millers, while the Angus and Blainſleys have gone for horſe feed. The ſuperiority of the potato oats, even on middling ſoils, is evident this year; though ſtill this does not eſtabliſh that they are really better calculated for every kind of ſoil than the old varieties. Owing to early growth, an eſcape was made from the ravages of the caterpillar, which accounts in ſome meaſure for their great ſuperiority this ſeaſon.

Very little alteration has as yet taken place in the value of cattle and ſheep; and it may be remarked, that prices in the *dead* market have rarely this winter been in uniſon with thoſe in the *living*. The ſtock at this time on hand is much below that of former years; though there is no want of inferior mutton, which is ſold *nominally* at a low price, but, in point of conſumption, is in reality higheſt to the purchaſer. If other diſtricts are not better ſtocked than Eaſt-Lothian, it requires no proof that a ſcarcity muſt erelong be felt. Sheep will probably continue longeſt to be plentiful; but cattle of good quality, according to every appearance, will ſoon be much in demand.

The value of labour, eſpecially that of maſons and carpenters, has of late prodigiouſly increaſed in this diſtrict. Building per rood, which not long ago was only 20s., and in 1802, 33s., got up, laſt ſummer, to 45s.; and wages, per day, were from 3s. 6d. to 4s., nay, even 5s. has been paid in ſome caſes for good maſons. This riſe was chiefly occaſioned by the erection of barracks at Haddington and Dunbar, where a good deal of money was freely circulated. It is plain, that no funds are in the farmer's hand for carrying forward new works upon ſuch extravagant terms; conſequently, a reduction is much to be wiſhed for, otherwiſe the building of farm-offices and ſtone walls muſt in a great meaſure be either neglected or ſuperficially executed. It is thought the evil will cure itſelf; a diſpoſition to work on lower terms having already appeared.

Coals, which in this climate may be ranked among the neceſſaries of life, have been uncommonly ſcarce this winter, and only to be got at ſome

ſome of the hills, by waiting one or two days till they were turned out. Whether the ſyſtem adopted at the collieries is defective, or whether the colliers, as a body, can be regulated like other people, is difficult to determine; but the evil to the country at large, and eſpecially to the tenantry, by thus detaining men and horſes ſo long, is abundantly notorious, and the cauſe merits an inveſtigation. Perhaps the evil may be traced to the act of Parliament which emancipated the colliers—an act well intended by its ſupporters, but, like many other philanthropical plans, neither calculated to increaſe individual happineſs nor public proſperity.

It is much to be wiſhed that Government, in the formation of tax-bills, would employ people qualified to expreſs their meaning in a plain manner, and that previous inquiries were always made at profeſſional people, before ſuch bills were paſſed, whether their execution was a practicable meaſure. This obſervation occurs from contemplating the difficulties attendant upon the income or property act of laſt ſeſſion, the numerous clauſes of which few people pretend to underſtand; though aſſuredly it was not an impoſſible taſk to regulate a five *per cent.* exaction with clearneſs and preciſion. In fact, the trouble and uneaſineſs given to individuals, is in many inſtances of greater importance to them than even the amount of their tax. Take an inſtance—If a farm has been ſet for more than ſeven years, the occupier is called upon to make a return of its preſent value, and if he makes a falſe return, i. e. undervalues the land, he is liable to double duty. Now, as it rarely happens that two people agree reſpecting the preciſe value of land, a tenant may thus be made liable, becauſe he holds an opinion different from others reſpecting the premiſes in his occupation. Another inſtance may be given as a proof of the degree of wiſdom poſſeſſed by the framers of the bill. Tenants of houſes are required to make returns of their reſpective rents, and to pay both their own and the proprietor's tax. Now it happens that the *occupiers* of more than one half of the houſes in the kingdom will not be liable to the tax; conſequently, while nothing is to be got from them as tenants, the very trouble of aſſeſſing and collecting the proprietors tax (in many inſtances the tax will not amount to a couple of ſhillings) will exceed the worth of the money ſo collected, independent of the trouble given to the private individuals concerned. It is believed that a ſenſe of theſe things has induced the tax-office, in ſome caſes, to allow returns from proprietors; and certainly they acted wiſely in giving ſuch permiſſion; but it is a poor compliment to the accuracy of the bill, that a neceſſity ariſes for executing it in a way directly contrary to the forms and regulations preſcribed, and in the face of numerous penalties. In a word, if a fine or penalty is due from any perſon, it is from the author of a bill which, in one way or other, bids defiance to the collected ſenſe of the Britiſh nation, and is little better than a ſealed book to the great body of the people upon whom it is meant to operate.

For the information of farmers in Scotland, it may be ſtated, that their profits or gains, by the 194th clauſe of the bill, are to be rated

at one half of the annual rent; therefore, according to our view of the ſubject, none are liable to the *minimum* tax who pay below 120l. *per annum*; nor to the *maximum* tax, unleſs their rent exceeds 300l. It appears alſo, from the third paragraph of ſchedule B, that *one eighth* is to be deducted from the aſcertained rent, which, to be ſure, will afford great relief to many tenants, particularly thoſe of ſmall farms.—— *Jan.* 28.

ENGLAND.

Letter from George Boſwell Eſq. dated Piddletown, Dorſetſhire, January 6. 1804.

'The continued ſeries of dry weather through both the ſummer and autumn, ſuch as we never experienced before, occaſioned the hay crops to be very light, with ſcarcely any aftermath. The watered meadows ſuffered almoſt as much as the dry meadows; for the ſprings were ſo very low, that we could not flood them. The ſale of ſheep and lambs, in the autumn, was exceeding dull, and the prices much depreciated; the former as much as 12s. per head, and the latter 6s. or more: both mended at the latter end of October, and ſtill more ſo in November. The turnip crop was, for the ſame reaſon (the long drought), a very partial one; not equal to half a general one. I had determined to make a comparative trial of the weight of a given quantity, not leſs than four ſquare perches of drilled turnips againſt the like quantity of broad-caſt; but the weather has been ſo long wet, that I almoſt deſpair of making it this ſeaſon: If I can get a few dry days before the froſt ſet in, I will yet do it.

'No one here ſows drilled turnips in wide rows, 27 or 30 inches, except myſelf, and I am indebted to Mr Culley for the firſt hint.

'The wheat crop was comparatively good, the grain decent, the produce not abundant; in many places a good deal of ſmut was found; but I am, and have been, for theſe twenty years paſt, free from it. The barley crop was pretty abundant in quantity, grain ſmall and rather light, but it works remarkably well in the malt-houſe. Oats were a tolerable crop, though rather long-tailed and thin-bodied, the potato oats excepted, which are good in quality, and yield a very decent produce. They were introduced from the north about two years ſince; and, if ſown on good land, will continue to be in repute, though there are large quantities of black oats ſown in this and the conterminous county. I do not think any of the corn crops are ſo bulky as they were the year before.

'Fat beaſts, or rather what ought to be fat, not plentiful, and are ſelling to the butchers at the time they would pay the graziers moſt for keeping; but people are afraid the food will not hold out the ſeaſon.

'Sheep

'Sheep on the rich lands would get on apace; but the continual rain is againſt them, eſpecially here, where ſcarcely any turnips are carted off, but conſumed on the land they grew on. The early ewes are now in full ſeaſon of yeaning, and conſiderable quantities of lambs are dropping every day. One farmer in the neighbourhood has had more than 600 already. None are houſed here, as we never feed any houſe lamb in this county. The turnips are almoſt all eaten by ſheep, very few by beaſts, none by ſtore cattle. Sheep and lambs entirely engage the farmer's attention—every thing gives way to the ſheep ſyſtem. Thoſe who cart off a part of the turnips (the number is very few), carry them upon green land; but the almoſt univerſal practice is to eat the turnips on the land they grow on, by giving them ſmall quantities at a time by means of hurdles, which are removed daily, that the ſheep may always have a certain quantity freſh. At night the ſheep are encloſed in a pen or fold, allowing about a yard ſquare of ground to each; and this fold is removed every day to a freſh ſpot regularly over the field. Strange infatuation! you will ſay. Of your mode of feeding, it is ſaid here, What! let the ſheep lye ſcattered all over the field!—Strange infatuation indeed! Perhaps thoſe who have attentively obſerved both methods, will think both right. This I will venture to ſay: You, if here, would ſoon do as they do here. But I will not ſay, We, if there, would do as you. Therefore the prejudices here are the ſtrongeſt, and moſt to be condemned.

'Swine are become numerous, conſequently cheap. The reaſon is obvious: Of all the various ſpecies of farming ſtock this is the ſooneſt repleniſhed, and comes the quickeſt to market; the fall in price is therefore great; and as corn is ſinking in price, pigs will be fattened in conſiderable quantities, and aſſiſt in reducing the price of butcher meat.

'The ſtate of the weather may be given in few words. The drought continued till the beginning of November; from thence to the middle of December, the weather was wet, but not attended with heavy rains; from thence to the end of the year, very tempeſtuous, with abundance of rain. Many people waited for the rain before they began to ſow their wheat; but, after a fortnight, the land got ſo wet, and the horſes ſunk ſo deep in the fallow, that they were obliged to defer finiſhing till the ſpring—a practice ſeldom uſed here.

'How is it, in a climate evidently warmer, we cannot ſow wheat in the ſpring with ſucceſs, when, in the north, it is not unfrequent to ſow a great deal? Our markets, at Chriſtmas, were, Beef (not fat) from 6d. to 7d. per lib. ſink offal; Mutton 7d.; Veal begins to come into market (good) from 8d. to 9d.; Pork in great plenty from 8s. to 9s. per ſcore (20 lib.); Butter 15d. per lib. of 18 oz. (every thing elſe only 16 oz.); good Cheeſe 80s. per cwt.—but little of this in Dorſetſhire; Cheeſe made after butter at 40s. per cwt.—of this ſort large quantities are made through the ſummer. Wheat from 6s. to 6s. 6d., and the very beſt 7s. per buſhel, Wincheſter—all ſorts of grain are ſold by this meaſure; Barley (our ſtaple grain) ſinks faſt—it was

25s. 24s. 23s. and now will ſcarcely bring 21s. per quarter; Oats, dear, 26s. to 28s. per quarter; Winter Tares, about 7s. per buſhel; Summer Tares and Peas will ſoon find a market—I mean about Candlemas; Hay, owing to the mildneſs of the ſeaſon, will not ſell for more than 4l. per ton; Turnips are ſeldom ſold here—the growers conſume them with their own ſtock, ſheep and lambs, except a few who take in hogs, i. e. lambs after they are ſhorn (which is always in the firſt ſummer), from Michaelmas to Ladyday to keep, at from 6s. to 8s. per head. Theſe are kept on turnips (if the farmer grow any), graſs, clover, and hay: thus a deficiency of turnips is remedied. It is very rare indeed that any are ſold by the acre. Very few people would give 3l. per acre for good turnips; and I do not know a perſon who would give 5l. per acre, even to ſave their ſheep from ſtarving. They are *all* ſown broad-caſt, hoed decently, and even ſome twice hoed. The high price of labour is much againſt us when let by the acre; and when the work is done by the day, they are very remiſs in their hours, as well as labour. Our laws are good, but we are very relax in enforcing them.

'The young cattle, particularly where there were watered meadows, remained out, &c. till almoſt Chriſtmas, with very little ſtraw, and ſome without any. They are now living in the yards upon ſtraw *only*. Thoſe cows that have calved, or are near calving, have a little hay given to them, but no turnips. We certainly are not œconomical in the management of turnips, or, which I believe is the caſe, our breed of ſheep conſume more food than yours. We reckon 100 hogs (lambs yeaned the ſpring before) will conſume ten acres of turnips, with not a little hay, and the run of a certain quantity of graſs land and clovers to draw back upon, between Michaelmas and Ladyday.

'The young clovers appeared in the autumn very thin; they now are much mended; and, if not injured by the froſt in the winter, will be a ſaving crop. The watered meadows now look delightfully; a beautiful deep verdure appears, where, a few weeks ſince, ſcarce a blade of graſs could be ſeen; and, if the winter continue mild, they will be ready to receive the ewes and lambs by the middle of February, and, by the end of March, the flock ſheep;—all then are drove to the fold upon the fallows intended for barley every night, the fold moved every day:—500 ſheep will thus manure an acre (Engliſh) in about a week, ſuperior, for one ſeaſon, to any kind of manure whatever; and the ſheep are the healthier for it. Thoſe farms, which keep only wether flocks, fold all the year through. The watered meadows ſupport the ſheep till the 1ſt or 2d week in May, and afterwards yield from ½ to 2 tons of hay by the beginning and middle of July. The ſtubbles are nearly all fallowed, and will, when the weather permits, be dreſſed down for a ſecond ploughing. Turnips begin to ſhoot out freſh; they will, if not checked by the froſt, be much too forward, and not continue uſeful ſo long as uſual.'

Letter

Letter from a Farmer in Wales, Jan. 15.

'The winter here ſet in early, and in November, we experienced about ten days ſevere froſt; we then had every reaſon to dread a long and hard winter, and began foddering our cattle three weeks ſooner than in ordinary years; and, although we had reaſon to think, after harveſt, that there would be abundance of good winter proviſion for our ſtock, we now ſee, that if we have an untoward ſpring, many will be ſhort. The weather, of late, has been open and mild, with heavy rains and great floods. Wheat in the ground has a good appearance, but ploughing ſeems to be behind in moſt places, the land being too wet. The ſheep, as far as I have ſeen, look poor and unhealthy; and where they have begun to drop their lambs, the ewes are thought to have little milk, and the lambs weak. Our markets for corn are fully ſupplied, and prices on the drop. Wheat and barley have not varied much of late; but oats have lowered 5s. *per* quarter within this laſt fortnight; the beſt oats, yeſterday, were not worth more than 19s. the quarter. Butcher meat, viz. beef, mutton, and veal, has advanced ſince Chriſtmas, and it is thought will ſoon be as dear as ever; good Beef or Mutton, is now at 8d. per lib.; Pig meat cheap; Bacon whole, viz. head, feet, &c. at 5d. and 5½d. per pound, ſome of the largeſt ſize at 4½d. Owing to the low price of barley, and the vaſt number of ſtore pigs on hand, there is more pig meat at market than ever before remembered, which has been a lucky circumſtance for the lower claſs, as butter and cheeſe are at very high prices; freſh butter is 1s. 4d., and good cheeſe 10d. and 11d. per lib. At St Nicolas Fair, the 17th of December, oxen (contrary to expectation) ſold well, and I believe few or none returned home, and cattle of every deſcription were dearer. Sheep ſtill keep dull, and will do ſo, till we have a demand from the eaſt: we like to ſee them go eaſtward in great droves. Mutton has been in great plenty at market for ſome months paſt, and would have certainly been at a very low price, had it not been for the high wages given to tradeſmen and labourers, which enables them to live on the beſt of every thing; and very few of the labouring men here, ever think of laying up a ſhilling for a rainy day, but one and all truſt to the pariſh for that.

'I mentioned in a former letter the encloſing of Cardiff heath; but as the buſineſs was only then in its infancy, I declined ſaying much on the different modes of proceeding, till I ſaw the crops produced. In the year 1801, an act of Parliament paſſed for dividing and encloſing this common, containing from eleven to twelve hundred acres, lying to the north of the town of Cardiff, and about a mile diſtant therefrom. This waſte originally was the property of the burgh of Cardiff; but, by negligently ſuffering every one to graze it, they loſt this right in a great meaſure, and it became free to all the country. It was once of much greater extent; but being no one's property, it was ſeized on

by all. When a poor man could ſcrape together enough to build a cot, there he ſat down; and, by incloſing a freſh piece of garden every year, many have come to farms of conſiderable extent. It was become a plantation of cottagers, whoſe dependence for a living, was on keeping two or three ſmall horſes to carry coal or iron, and they were ſo numerous, that they ſtarved each other. About twenty-four years ago, the neighbouring gentlemen put a ſtop to their further increaſe, by drawing down all new encroachments; and, two years back, in conſequence of the act of Parliament already mentioned, a certain proportion was ſold to pay for ſurveying, making new roads, &c. &c.; another part, to the amount of near 300 acres, was allotted to the town of Cardiff, with liberty to improve or ſell; a third portion was for the lord of the manor; and what remained, was divided amongſt *the Brinkers*, or thoſe whoſe eſtates joined the commons, in proportion to the extent of their eſtates. The portion ſold, was divided into ſmall lots, which brought, ſome ten, and ſome as high as eighteen pounds the acre. Every obſtacle being thus removed, about the beginning of January 1802, they began to incloſe with ditch and hedge; and by the middle of May, the whole was incloſed, except that part ſet aſide for the town of Cardiff, and about fifty acres allotted to a gentleman, whoſe tenant claimed the privilege during his leaſe, he having rented his farm with a right of common. As it fell to many hands, the incloſures vary much in ſize; from half an acre to forty acres. The ſoil, though of two different kinds, does not vary a great deal, being principally of a hard gravel at bottom, with a depth of a foot or more of black light earth, covered with ſmall furze (or whins) on the ſurface where dry; the reſt of a boggy nature, with a hard ſharp gravel at bottom; and the ſurface, a black light peat earth, through the middle of which they made a main drain of nine feet wide, and ſix feet deep, which drain was done by the commiſſioners, and has carried off the water effectually. There have been various methods of improving practiſed; and in ſpring and ſummer 1802, they puſhed forward with great ſpirit; ſeveral fields were, that year, ploughed and ſown with oats; others dug with ſpades and planted with potatoes; others ſown with turnips, and one field of eight acres pared with the Breſt plough and burnt, having a light liming given it. The turnips were a fair crop where lime was applied, but where neglected, they failed entirely. Potatoes, in moſt inſtances, proved good, and the oats but poor. During that ſummer, paring and burning were carried on with great ſucceſs, the year proving favourable; and by the middle of October, there was above 100 acres ſown with wheat; and in the ſpring, many fields of oats and barley, as alſo of potatoes and turnips. Wherever lime was given, the wheat was good, and the greater quantity of lime, the greater crop of wheat; where no lime was given, the wheat failed in every inſtance; one field of ſeven acres, fallowed without paring and burning, and well limed, proved a fine crop; another piece of ſix acres, ſuppoſed the beſt on the heath, fallowed the ſame as the ſeven-acre piece, but not limed, proved not half a crop;

three

three fields adjoining, ſuppoſed good land, pared and burnt and ſown in good ſeaſon, but without lime, alſo failed; ſeven acres of oats, managed the ſame way, turned out a fair crop; the barley failed in every inſtance; eight acres of oats after turnips, which had a light liming, yielded a very great crop. The turnips this year are thin but healthy, and of good ſize. There is a great deal of wheat ſown, all of which, I believe, had a good liming, but ſome of the land was only fallowed without burning the ſurface. The whole looks healthy at preſent; but it did the ſame laſt year at this time; and where it failed, it went off in April. Our farmers, at preſent, ſeem at a ſtand; the high price of labour, and the low rate of farm produce, have damped all improvements here in that way; but the increaſe of iron furnaces and collieries, both in this county and Monmouth, goes on to a great extent; and numbers of men are regularly employed at high wages; which, together with the conſtant drain for the army and navy, with the number of volunteers raiſed and often called out, muſt cauſe farm labour to be much neglected.

'The current price for labourers is 2s. per day, and near a great town 2s. 6d.; maſons and carpenters 2s. 6d. and 3s., but more about towns, and at the iron and coal-works, or the new rail-roads, &c. &c. where they work moſtly by the piece. Labourers expect to earn from 20s. to 24s. per week. Gentlemen here, at leaſt many of them, make a pointed rule, and ſay, we will not give more to our labourers than 8s. and and 9s. per week; and they get old men, or ſome that no others will employ, for that money; but a farmer muſt have able hands, that can do his work, and muſt of courſe pay for them. I have always ſuppoſed, for theſe ſome years paſt, that the price of labour was higher with us than in any other part diſtant from London. In July 1802, I was obliged to attend at Hereford aſſizes, and being detained there ſome days, with ſeveral other farmers, our ſpare time was employed in going round the country to ſee and hear if any thing new was to be learned, and in converſing with farmers and labourers. We found the rate of labour in that part 6s. and 7s. per week, when we were giving 10s. In the weſt of Wales, labour is lower than with us, and numbers of young men from Caermarthen and Pembrokeſhires come here for work.'

Lincolnſhire Quarterly Report.

Lean cattle have a dull ſale, and prices are rather lower than formerly. Beef in retail ſells from 6d. to 7d. per lib., and mutton from 7d. to 8d. The wool of this county, which is of the long, or combing ſort, brings at market from 12d. to 13½d. per lib.; and hay, which with us is an abundant article, will not fetch more than 3s. 6d. and 4s. per 8 ſtone, or 112 lib.

Our corn markets are well ſupplied; and, as laſt ſeaſon was uncommonly favourable for the fenny diſtricts of this county, the general qualities are ſuperior to thoſe of our common produce. Wheat ſells from 48s. to 60s.; barley, 20s. to 24s.; rye, 28s. to 31s.; oats, 17s. to 20s.; beans and peas, 32s. to 35s., all per quarter of 8 Wincheſter buſhels. Potatoes from 4d. to 6d. per peck.

Owing to the improvements carrying on in the fens, and the number of men employed in the army and volunteer corps, a ſcarcity of hands has been lately experienced, and the value of labour has of courſe increaſed. Farm labourers receive 2s. per day in winter, 3s. and 3s. 6d. in ſummer. Carpenters 3s. to 4s.; apprentices 2s. to 3s. Maſons 3s. 6d.; all without board.——*Jan.* 16.

Eſſex Quarterly Report.

Since laſt report, the wheat has aſſumed a fine appearance; but many people, it is to be feared, have fallen into the error of ſowing too thick in this favourable ſeaſon. In the autumn of 1802, wheat was generally ſown very late, and in many inſtances an extra quantity of ſeed was not allowed—without reflecting that late ſown wheat has not that opportunity of *ſtubbing* enjoyed by that depoſited earlier. In the year 1803, where this was not attended to, the crop, in many inſtances, eſpecially upon poor lands, having proved thin and deficient, more ſeed was given than requiſite in ſuch a genial and temperate ſeaſon. Perhaps they will find the effects of it in harveſt; for we always obſerve early ſown wheat, when too thick in the firſt part of the year, turn out very thin and weak when ready for the ſickle. Tares look remarkably well, and promiſe an abundance; perhaps owing to the opportunity there was of ſowing them early; for it is a maxim with moſt good farmers to put them into the ground immediately after harveſt, if poſſible. Some keep a plough at work during harveſt, to prepare the land ſufficiently early for their reception. Clovers look well and luxuriant. The millers no longer complain of a deficiency of water, having received a moſt copious ſupply within theſe laſt two months. There has not been ſo much at a time for three years paſt, though field labour has been conſiderably retarded thereby. A few fences and ditches are occaſionally made, but the chief employ for huſbandmen at preſent is thraſhing. A dry froſt is much wanted for various purpoſes of agriculture, particularly for the eſſential operation of carrying manure upon the lands. The prices of wheat with us are very different, the qualities being more variable than uſual, owing to the blights and mildews of laſt ſummer.

Where work is done by the day, 10s. per week is the general rate, unleſs cloſe to the metropolis, where it is higher. Upon large farms, it is in ſome places the cuſtom to board two men and a cow-boy. The *head* man has from 8 to 12 guineas, the *under man* from 5 to 7 guineas, and a boy from 2 to 4 guineas. Many barracks have lately been erected in the county, which makes the wages of carpenters and bricklayers very high; not leſs than from 3s. to 6s. a day is given by the builders; but, independent of them, carpenters charge 18s. per week, bricklayers 17s. Maſons will earn from 4s. to 5s. per day. Poor-rates, for this laſt quarter, in the pariſh of Bocking, are 6s. 6d. per pound of valuation. The mills and machines, which ſince the laſt war have been introduced by the manufacturers into this diſtrict from Yorkſhire, and which were uſed chiefly in the manufacturing of baize, are now employed

ed in making blankets for Government, ſo that there are ſtill half the former quantity of poor earning an honeſt livelihood, which may be conſidered as a happy circumſtance to that pariſh. In the laſt war no manufactory was carried on, and the rates were 48s. in the pound.

It is the intention of this county to make an application to Parliament, in conſequence of the preſent malt-duty; and the two neighbouring counties of Norfolk and Suffolk mean to uſe ſimilar meaſures for procuring relief.——*Jan.* 16.

Yorkſhire Quarterly Report.

On a compariſon of the preſent period with the correſponding one of laſt year, we find a ſtrongly marked reverſe, in regard to the prices of produce, and conſequent encouragement to rural exertions. They were then at a fair *ratio* between the producer and conſumer; they are now ſo low as to be rather diſcouraging to the grower: but as the cauſe may be deemed, in ſome degree, temporary and occaſional, as produced by the peculiar ſituation of public affairs, theſe circumſtances of diſcouragement may perhaps be the leſs inſiſted on at preſent.

Many of the wheat ſtacks yield under the flail much leſs than was expected—the mildew, &c. having been more injurious in many parts than the general report before and during the harveſt ſeemed to allow. Barley and oats are good in quality, and about a fair average in point of product: not ſo beans, which are deficient in quantity.

A conſiderable extent of our arable ſurface is under wheats, which were well ſown; and though the weather has been of late unuſually variable, with ſevere froſts, much ſnow, and heavy and continued falls of rain, they do not appear much worſe than uſual; yet thoſe on wet, poor ſoils, wanting manure, ſeem on the wane, from the preſent exceſs of moiſture.

The turnip crops were recruited, in ſome degree, by the latter autumnal rains; inſomuch that many of them bear the feeding of ſtock much longer than could have been expected. They have been ſold to ſtock-maſters, at very high prices—from 4 to 7 guineas per ſtatute acre, to be eaten on the ground by ſheep; but, except on very dry layers, the ſheep do not thrive on them during the preſent extremely wet weather. Potatoes are not very plentiful, but good in quality; the price about 3s. per buſhel. Hay is now ſelling at from 4 to 7 guineas per ton.

Clovers and other graſſes have planted thin, though much better than the exceſſive drought of the ſummer afforded any proſpect of. Fat and lean cattle, and ſheep, are at preſent rather higher in price than they have been of late. Good horſes of all ſorts are dear. Beef, mutton, and veal 7d. per lib. Butter 1s. 6d. Beſt wheat 7s. Barley 3s. 6d. Oats 2s. 6d. Beans 5s. per buſhel. Rape and flax ſeed are articles of value, about 45l. per laſt, and deemed riſing.

The wages of maſons and carpenters are about 2s. 6d. to 3s. per day. Thoſe of farming labourers from 1s. 6d. to 2s. 6d. Poſſibly theſe may

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be differently appreciated in the ſpring than they are during the preſent dull ſeaſon of the year; eſpecially if the Chief Conſul ſhould ſucceed in cutting out ſome other work for the country.——*Jan.* 18.

Norfolk Quarterly Report.

If, as a very intelligent writer * has lately aſſerted, 'equality between the population of a country and the means of ſubſiſtence furniſhed by its territory, is a law of nature;' and if, as I believe is aſcertained by a late pretty accurate inquiry, the population of this kingdom has within a few years conſiderably increaſed, it follows as a legitimate deduction from theſe premiſes, either that we muſt prepare to meet this increaſed call for occupation and ſubſiſtence with increaſed reſources of employment, and more particularly with an augmentation of the ſtaff of life—for none can work, who cannot eat; or that this augmented population, which nations ſo much pride themſelves upon, and conſider as one of the prime nerves of the ſtate, will prove any thing rather than a bleſſing; for it muſt eventually bring down upon the people at large (in all countries where a material diſproportion exiſts on the ſide of population), famine, and all its attendant horrors.

Every government, therefore, ought to exert all its energies to encourage and augment the produce of huſbandry; and every private individual, who engages in this laudable attempt, is a true friend to his country, and perhaps, even in the humble office of a reporter, may contribute his mite to the public welfare. Impreſſed with this idea, I again take up my pen to give you ſome few obſervations, (the ſeaſon ſuggeſts but few), on the preſent agricultural appearances and occurrences in the weſtern part of the county of Norfolk, a portion of the kingdom which has been declared, long ſince, by Royal authority (Charles II.) uſeleſs for every good purpoſe, except to furniſh materials for repairing the roads throughout the reſt of his Majeſty's dominions. But, by the by, ſurely this '*mutton-eating king*,' as the facetious Rocheſter is ſaid to have denominated him, never taſted *Norfolk mutton*, or he would have appreciated, more juſtly, the value of a county which produced even then ſo exquiſite a repaſt; and now, not only plentifully ſupplies its increaſed population, but every year ſpares a conſiderable ſurplus for its leſs-favoured neighbours.

Sowing of wheat commenced early. The ſeed quickly vegetated, and, encouraged by an open quarter, and a ſucceſſion of warm ſhowers, now covers the ground with a full ſtock of luxuriant plants. The rains have lately fallen heavy, and almoſt inceſſantly; but though theſe are frequently productive of much miſchief on ſtrong ſoils, they ſeldom are ſo copious at this ſeaſon as to occaſion any material injury to the light, ſandy, and gravelly fields of Norfolk. I confeſs, however, I do not wiſh to ſee my wheat, on theſe ſoils, aſſume too early an appear-

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* Malthus on population.

ance of luxuriance; it impoverishes the soil, brings on premature debility, and so completely exhausts the plant before the fiery day of trial (summer) arrives, that it generally produces a feeble stem, bearing a short, upright, and badly filled ear. It presents (as I farm, I love to moralize) no unapt emblem of a young, improvident spendthrift, who wastes that substance and those powers in the prime, which ought to be carefully reserved for the support and solace of the autumn of life. I love to see my wheat gather and thicken in the spring, employing, if I may be allowed to pursue the allusion, the resources which are to nourish and support it, with prudent economy; not dissipating in a few months, what ought to be wisely husbanded for many. Hence the stem generally grows vigorous and healthy; and the long ear, bending with its precious weight, gives promise, which it seldom disappoints, of a plenteous produce of heavy grain. There is another misfortune frequently attending this premature luxuriance. It is an old proverb, 'An ill weed grows with speed;'—in this instance truly verified. The most mischievous *weedy* enemy to wheat, on these light soils is, in the provincial dialect of the country, called '*red weed*,' the wild poppy. This 'grows with its growth, and strengthens with its strength;' and, from an early and rapid progress, bidding defiance to any future severity of weather, frequently acquires, and maintains such an ascendancy, as completely to choke and ruin the crop. And the misfortune is, that it is almost impossible to destroy, or even to check this pernicious weed; for tillage, by increasing pulverization, liberates from the clod these diminutive seeds with which the land has been impregnated for centuries, and thus only increases the evil. Winter tares are equally luxuriant as the wheat; but here the same objections do not apply. Tares are principally designed to furnish green food in the early part of the summer; are cut before the weeds (many of which are eaten with equal avidity by the cattle) begin to shed their seed, and therefore their present appearance is matter of exultation.—Artificial grasses have also produced a full plant, healthy and forward.

The turnip crop is certainly, and more especially upon the strong wheat soils, extremely defective, and the price in the early part of the winter was high; but the mild and open quarter which succeeded the harvest, has enabled the sheep master to make a longer reserve of them than usual; the demand has, at present, considerably decreased, and the price is consequently reduced; though, in many instances, they are already beginning to decay, and a change of weather may again bring them into demand. The value of corn certainly continues much too low to allow the farmer an equitable profit. Barley of the last harvest is a productive crop; but of the wheat I entertain a very different opinion: I know many instances where the produce per acre has not exceeded, some, where it has not reached one quarter and a half, and where the weight has not been more than 49 lib. per bushel Winchester. I do not think I average the common crop too high, when I state it at two quarters and a half per acre, and the weight at 59 lib. per bushel.

Calculate

Calculate the deficiency of flour from every acre of wheat, and, as the calamity is not confined to one, but extends itſelf over many uſually productive diſtricts, it muſt prove a matter of ſurprize, that the price of wheat has hitherto continued ſo low, and is ſtill, in the language of Mark-Lane, 'looking downwards.'

The profits on arable and grazing lands, this year, will admit of no compariſon; the grazier has been the only favoured agriculturiſt. His profits muſt have been conſiderable; for though he certainly bought dear, he ſold out of all proportion dearer.——*Jan.* 18.

Northumberland Quarterly Report.

The latter part of the year 1803 was remarkable for the froſt ſetting in ſo early as the middle of November, and continuing till the 11th curt., with the exception of a few days in the latter end of November, and beginning and end of December. The ſnow was never in great abundance; the greateſt quantities fell on the 5th and 6th December and the 7th January, but did not exceed 18 inches in depth on the plains or low grounds. Since the froſt ceaſed, the weather has been mild and freſh; the graſs grounds were ſeldom ſeen with a more verdant appearance, and the wheats are looking remarkably well.

From the above circumſtances, the ploughing is not ſo forward as it ought to have been, and many clover leas and other grounds that were intended to be opened before Chriſtmas, are only now in hand.

The markets for fat ſtock have varied little through the winter; the preſent prices are, for beef, from 7s. to 7s. 6d. per ſtone (of 14 lib.) ſink, and for mutton from 7d. to 7½d. per lib. ſink. Our corn markets are very dull; wheat from 5s. 6d. to 6s. per buſhel; barley 2s. 2d. to 2s. 6d.; oats 2s. 2d. to 2s. 8d.; peaſe 3s. 6d. to 4s.

The price of barley being leſs than the price of oats, has induced many farmers to feed their horſes with the former, and ſell the latter; as oats may be turned into money, but barley cannot be vended in this diſtrict at almoſt any price. Is this owing to a ſuperabundant crop in other diſtricts? (which is not the caſe here;) or to the additional duty on malt? which tempts the conſumers of that article to ſubſtitute leſs expenſive, but probably more dangerous ſubſtances in its room. Whatever may be the cauſe, the conſequence muſt be, that the farmer will grow leſs of this grain, as he cannot afford to raiſe it at ſuch reduced prices, conſidering the advanced rent of lands, additional taxes, and the great advance of labourers wages, which, in general, are one third more, and in ſome places double, what they were ten years ago.

Where artificers are to be employed, their wages are even more than doubled. Carpenters and maſons, who uſed to work for nine ſhillings a-week, advanced, about four years ſince, to fifteen, and laſt year to *twenty-one ſhillings* per week. Such high wages may be afforded by manufacturers, who are making thirty or forty *per cent.* of their capital, or by undertakers of jobs; but cannot be paid by a farmer, who

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ſells barley at 2s. 2d. per buſhel, and is ſcarcely making common intereſt of the money he has employed.—*Jan.* 21.

Letter from London, Jan. 23.

'We have had a large ſupply of all kinds of grain, for two months paſt, at Mark-Lane, both of home and foreign growth; and prices, which in general had advanced after I wrote you laſt, are now lower than at that period. The wheats preſented are very various, chiefly of middling quality; fine white ſamples have brought readily ſeveral ſhillings advance. The barleys of laſt crop are of excellent quality, and the malt made from them uncommonly fine.

'The ſeaſon has been very mild; excepting a week about the middle of December, we have had no froſt to prevent the plough being regularly worked. Since that time, we have had much blowing weather, with almoſt continued rain, which has flooded ſome of the low diſtricts.

'There have been few freſh arrivals for two market days paſt. Prices continue nearly the ſame.

'State of London Markets, Jan. 23. 1804.

Wheat,	46s. to 50s.	*Good* Red Clover,	84s. to 90s. p. cwt.
Good mealing do.	52s.—54s.	Do. White do.	90s.—112s.
Fine white do.	57s.—58s.	Do. Trefoil,	48s.—56s.
Barley,	23s.—25s.	Do. Rib Graſs,	56s.—60s.
Feed oats,	18s.—21s.	Do. Cow Graſs,	90s.—110s.
Short ſmall do.	23s.	Burnet Seed,	1s. 3d. per lib.
Poland do.	23s.—25s.	Rye Graſs,	5s. 6d.—6s. 6d. p. buſh.
Rye,	30s.—31s.	White Rd. Turnip,	26s.—28s. do.
Hog Peas,	35s.—38s.	Green do.	32s. do.
New Tick Beans,	29s.—31s. *ſoft.*	Red do.	40s. do.
Old do.	33s.—35s.	Swediſh do.	1s. per lib.
New Small Beans,	33s.—35s.		
Old do.	39s.	Hay,	4l. 10s. to 5l. per load.
Boiling Peas,	42s.—46s.	Straw,	30s.—32s. per load.
Malt, 52s.—Fine new do. 57s.			
All per Quarter of 8 Buſhels.		Spring Tares,	8s. to 8s. 6d. p. buſh.

'Smithfield market continues tolerably well ſupplied, and little alteration of price has taken place. Cattle are from 4s. 4d. to 5s. 6d.; Sheep, from 4s. 6d. to 5s. 3d.; Veal, 6s. to 7s. 6d.; Pork, 4s. to 5s. per ſtone of 8 lib.'

IRELAND.

Letter from a Gentleman at Dublin, December 10. 1803.

'An increaſed zeal for the amendment of live ſtock—cultivation of green crops—drilling grain, &c. particularly by Cook's machine with ſingular ſucceſs—practice of irrigation—form an happy emblem of the advancement of improved huſbandry.

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'The propoſed plan for the manufactory of improved implements of huſbandry is an eſtabliſhment anxiouſly looked for, as thereby good implements may be obtained at reaſonable prices. This eſtabliſhment, which is about to take place immediately, reflects highly to the honour of the propoſer, clearly pointing out the wiſdom of the meaſure, which has in view the educating, as apprentices, young lads, to be diſperſed, when proficients, into the different counties of Ireland, in order to train others; ſo that a thorough knowledge of the conſtruction of good implements may be general—an object long wiſhed for.

'Land-ſtewards, cartwrights, ſmiths, ploughmen, particularly from the Lothians, Berwick, and other well cultivated diſtricts, when well recommended, may be certain of being encouraged, as by good conduct they muſt prove great acquiſitions.

'The ſummer was diſtinguiſhed for unuſual drought. The hay crop, though not heavy, was well ſaved, and will prove, as to quality, more nutritious than thoſe of former years. Hay, therefore, will on an average furniſh as much forage as uſual.

'Potatoes in dry or ſound ground have been deficient a fourth or fifth of the uſual average; but, in cold ſoils, or thoſe generally redundant with moiſture, they are much ſuperior to thoſe of former years; inſomuch, that, on an average, they are nearly equal to the uſual produce.

'Turnips have ſuffered greatly from the dryneſs of the ſeaſon, though the rains which fell in November mended them ſomewhat. Spirited farmers have been much diſappointed by an impoſition of bad ſeed of Swediſh turnip. This is particularly to be lamented; as, in the few caſes of genuine ſeed being cultivated, the crops have ſucceeded in the happieſt manner. A good farmer's ſeed ſhop is much wanted.

'All the varieties of the cabbage tribe have ſuffered much for want of timely rain. The crops of wheat, barley, and oats were abundant, and harveſted in excellent order.

'The efforts of a few diſaffected perſons in July cauſed a temporary check to agricultural purſuits; but happily it was of very ſhort continuance. The farmers, obſerving the weakneſs of the attempt, ſoon renewed their attention to rural works. The hopes of ſucceſsful rebellion are abandoned, and the practicability of an effective French invaſion become illuſive. The late trials of the inſurgents have made a deep impreſſion on the numerous population of this country.

'The ſhows of the farming ſociety of Ireland have been peculiarly important, directing the attention of the affluent, the great landholder, and the practical huſbandman, to the improvement of their poſſeſſions.

'In conſequence of the excellence of the ſoil and climate, the comparative lowneſs of rent, and the increaſed length of tenure, an encouragement peculiarly offers for intelligent farmers to ſettle here, particularly from the well cultivated diſtricts in Scotland. Such, with the neceſſary recommendations, may with certainty reckon on being well received, on applying to the Farming Society of Ireland, *No.* 34. *New Sackville Street, Dublin.*'

Liver-

Liverpool Meteorology 1803.

(Continued from p. 497, Vol. IV.)

October 1803.

A little hail and rain.—7th, Fair and windy.—11th, Foggy A. M. —16th, Windy and hail.—18th, Cloudy, misty rain; Fair.—24th, A. M. *ignis fatuus*.—25th, Fair and sun; though great moisture, and no rain. The hygrometer, at two P. M. was 3 in. 6 dec.—30th, Little rain.

Approxim. of the wind to W. Rain, more or less, 16 days.

	In.	Dec.		In.	Dec.
Fall of rain,	0	82	Evaporation of water,	1	55

November.

Misty rain.—2d, Fair, hoar frost.—6th, Much rain.—12th, Fair and sun at intervals.—15th, Snow and rain.—22d, Windy (in London, thunder).—23d, Hail and rain; windy.—28th, Much rain.—30th, Fair and sun.

Approxim. of wind to South. Rain, hail, and snow, more or less, 21 days.

	In.	Dec.		In.	Dec.
Fall of rain,	3	25	Evaporation of water,	1	1

December.

Cloudy, misty, rain, and windy.—5th, Snow; thick fog.—8th, Hail and snow; foggy and rain.—19th, Very windy.—20th, Cloudy.—24th, Much rain.—25th, Sun, windy, and rain, to the end.

Approxim. of wind to the South.

Rain, hail, and snow, more or less, 22 days.

In the whole year - - - 156

	In.	Dec.		In.	Dec.
Fall of rain, - -	4	6	Evaporation of water,	1	0

Total Rain that fell at Liverpool in 1803, as measured by G. J. -	25	42	Total Evaporation in 1803 -	23	69

NOTICES

NOTICES TO CORRESPONDENTS.

We are desired to state, that the articles of intelligence from Tweeddale, given in the November Number, and in the Supplement, were not furnished by the gentleman who usually favours us with a report of that district.

A full supply of materials for making up Mr Cockburn's *Memoirs* being now received, an account of that gentleman will, without fail, be given in next Number. In mean time, we beg leave to express our best thanks for the liberal assistance furnished in the formation of this article.

The Observations of Celerius on the Obstacles to Improvement are unavoidably postponed; the press of matter delayed from the Supplement having occasioned an increase of stock in hand which could not be vended in the present Number.

The Letter from London concerning the Predial and Personal Services imposed upon the Tenantry in some places of North Britain shall not be neglected. We have made inquiries, and are sorry to learn, that what is stated by our Correspondent is amply confirmed by the result.

A Buchan Grosser's Queries shall appear in our next.

The *Review* branch has been omitted at this time, in order to make room for Dr Keith's interesting Inquiry concerning the relative abilities of English and Scotish Barley to pay the Malt-Tax.—Existing circumstances called for a speedy insertion of that valuable Paper.

If the Dumbartonshire Farmer chooses to favour the Conductor with his Address, under cover, to the Publishers, some particulars shall be transmitted relative to the matters contained in his Communication.

We shall be happy to receive accounts of the former and present state of Husbandry in the several Counties of Scotland, similar to the one given in this Number from Ayrshire.

A great many Communications have lately come to hand. The writers of them will accept of our grateful acknowledgements, and may depend upon suitable attention being paid to each.

We will thank any of our friends in Cumberland and Westmoreland for a Report of these districts.

A. G.'s *Letter on Thrashing Machines* is this moment come to hand.

No. XVIII. will be Published on Monday the 7th May.

Errata in Supplementary Number.

P. 524. fifteen lines from bottom, for *why don't we include turnips as an article of* drill *husbandry*, read, why don't we include turnips as an article of *horse-hoeing* husbandry.

Errata in this Number.

P. 13. fourteen lines from top, for *proving* read *providing.*
P. 20. eleven lines from top, for *principal* read *principle.*